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THE FUTURE OF HUMANITY

THE FOWLER IN IRELAND

PLATE I.]

"AMONG 'EM AT LAST!"

[*Frontispiece.*

Or Retrieving Cripples: the result of placing 24 lbs. of BB (nicely!) into a company of several thousand Wigeon, after three weeks without a shot, owing to unfavourable weather and the wildness of the birds.

THE
FOWLER IN IRELAND

OR

NOTES ON THE HAUNTS AND HABITS

OF

WILDFOWL AND SEAFOWL

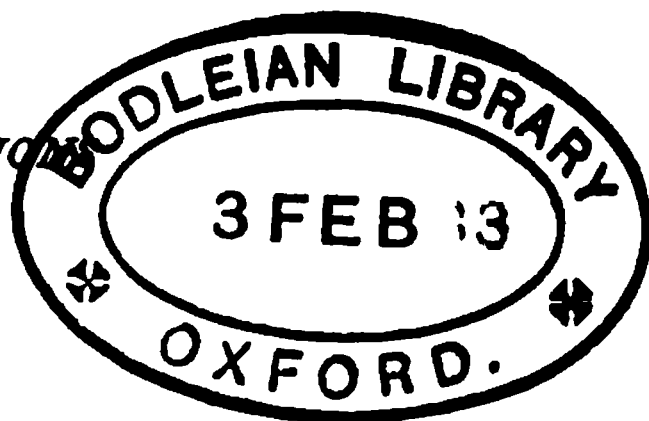
INCLUDING

INSTRUCTIONS IN THE ART OF SHOOTING AND CAPTURING
THEM

BY

SIR RALPH PAYNE-GALLWEY, BART.

WITH NUMEROUS ILLUSTRATIONS



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INTRODUCTION.

A HEAVY gale is blowing from the east. Wearied of the shrieking wind as it whistles through the rain-tautened cordage, I descend cabinwards, debating whether the occasion is not a fitting one to begin to put in order my collection of notes for an oft-proposed and as oft-deferred book on wildfowl-shooting in Ireland. It would perchance beguile the time, help to pass the long, dark evening, and be at least a change from wondering whether the anchor drags, whether the wind is moderating, and other anxious surmises affecting a fowling-cutter on the bleak coast of a wide estuary, with bad holding-ground and a lee-shore. Despite the utmost care, this is sometimes the fate of a fowler. Had it not been for that last tempting gaggle of Brent Geese, we should have seen our way safely into shelter and be relieved of all anxiety; instead of finding ourselves in the above predicament, with a falling barometer, on a winter's afternoon. But all ends well. The morning breaks bright and calm, and after a good day's sport scribbling is again resorted to.

Though a wildfowl shooter's existence is often tinged with melancholy, by reason of the broad expanse of waste and shipless water whereon his favourite sport is pursued, still, should game-shooting become monotonous, and impair the energy with which it was wont to be followed, I would

say, let such a man hie him to the coast, with its myriads of wary wild birds. There he will be greeted with the scream of the Curlew, the call of the Duck, the clang of the Wild-goose, the trumpet of the Swan, and the mocking laugh of the Great Northern Diver. There his utmost ingenuity will be taxed. Cunning must needs meet cunning, watchfulness, watching; or the bag will be light. Then look at the surroundings, what a change! The tides, the sea, wind and weather, all affect him and his sport; all will interest him as they cheer or mar his hopes of success. What a scene is this compared to the never-varying turnip-field, the leafless, dripping wood! Should a hare or partridge there run or rise within thirty paces, it is probably killed; if at forty, it perhaps escapes; if shot, it is pitched into a bag, "you may depend on't;" if missed, why, "there's an end on't:" though now and then a little excitement is caused by trying the latest invention in guns, or by a chance at the one Woodcock of the day. I think (perhaps erroneously) that when such shooting follows year after year without variety, as is not unfrequently the case, the pleasure begins to flag, the interest to fade.

It is evident that many must share these sentiments with regard to British game, or they would not pursue with such ardour in distant lands nobler, wilder, and more wary birds and beasts than hare or pheasant can claim to be. Even a wild day's sport and a mixed bag afford far more satisfaction than many a modern game-preserved will admit, and why? I believe the change, the uncertainty, has somewhat to say to it—not forgetting the dogs with which such a bag is usually contrived. Still a *great deal* of nonsense, it must be admitted, is to be heard concerning preserved game. For example, a denouncer of modern sport with the gun, not long since, remarked to

me that "he liked to find and shoot his few pheasants with dogs;" and added, "he should not at all approve of the birds being driven towards him out of a cover like hunted chickens"—a well-known cry often uttered by those who do *not* shoot. Now, pheasants flushed before dogs are the very easiest of marks as they flap up, and are then much more like tame fowl than when driven a quarter mile or so down wind. Stand in a narrow ride with dark-foliaged firs, like a wall, on either side of you; a small lane of sky overhead corresponding in width to the space below; a high and perhaps favourable breeze, and some distance to gain speed; then, as the pheasants (those much-despised fowl) pass skimming above with extended and almost motionless wings, bring them down if you can! "Rocketers," "Collar-bone-crackers," and driven birds, are what we seek for now-a-days when pheasant-shooting, on account of the difficult marks which they usually present.

A pheasant, under fair conditions, and when *not* kicked up under foot, is by no means an easy mark, as many, to show their wisdom (though ignorant of sport), foolishly affirm.

But to return to our wildfowl. Most men know some particular bit of rough ground or marsh where a Duck or Snipe may be found; but few, very few, know anything of wildfowl-shooting in its proper sense, or of the haunts and habits of fowl, their various species, distinguishing calls, and different flight, all of which contribute to make the observation and pursuit of them so fascinating a pastime.

Many excellent and voluminous books have been published on the subject of birds, and especially British birds, amongst which, of course, wildfowl find a place; but such works, as a rule, have been written rather from the naturalist's than from the sportsman's point of view, and convey

but little information regarding the habits of wildfowl as observed by a fowler (who has the *best possible* chances of observation), and none at all as regards the various methods of shooting, netting, or decoying them. In the following pages I hope to supply this deficiency, and in doing so I propose to confine my remarks chiefly to such wildfowl as are regular winter-visitants to Ireland, alluding but briefly to the rarer species which occasionally and at uncertain intervals visit its shores.

As regards the various plans, and *implementa* generally, I can only describe what, after many years' experience and numerous experiments, I have found to be best adapted for the purposes required. Let the reader, whose tastes lie in this direction, give a trial to the hints and suggestions I have to offer, and with practice and patience, and, I may add, with health and strength (for without these no one should attempt wildfowling), he cannot but succeed and find keen enjoyment from morn till eve, be the weather fair or foul.

It may be observed that although the scenes described and notes herein contained all pertain to Ireland, wildfowl do not change their habits or vary their plumage in different countries; and the same descriptions will equally apply whether the birds be met with in England, Ireland, or Scotland. In the matter of punts, guns, nets, and gear, wherever the birds are found *they* are wanted, and will answer equally well all the world over. The directions for using them I give with deference, and do not in the least degree attempt to lay down the law, or instruct older and more experienced sportsmen on such matters. But to beginners in the art—for art it is—of Duck-shooting, I venture to hope that the chapters thereon will be found of service.

It only remains for me to acknowledge my thanks to

those gentlemen, naturalists, and brother sportsmen in Ireland, who have so kindly furnished me with statistics relating to wildfowl in their respective districts, and whose names will be found scattered throughout the volume, wherever I have had occasion to quote the information received from them.

To Mr. J. E. HARTING I am especially indebted for his assistance in preparing these pages for the press, and for various interesting notes on the natural history of wildfowl and on the rarer animals of Ireland which he has enabled me to record. My acknowledgments are also due to Mr. CHARLES WHYMPER for the care and skill which he has bestowed on the illustrations.

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THE FOWLER IN IRELAND.

CHAPTER I.

Introductory—Surface Ducks and Diving Ducks—Changes of Plumage—Mode of Flight—Wildfowl-shooting.

THE various species of wildfowl which come under the head of Ducks, and which form the principal objects of pursuit with the wildfowl shooter, may be conveniently divided into two groups—the surface-feeding Ducks and the diving Ducks. Among the former are the Mallard, Wigeon, Teal, Garganey, Pintail, Shoveller, Gadwall, and Sheldrake;* among the latter the Pochard, Goldeneye, Tufted Duck, Scaup, and Scoter, of which last-named three species visit the British Islands.

Apart from their distinctive coloration, members of the latter group may usually be recognized from those of the former by the well-developed and broadly-webbed hind-toe, which materially assists their progress under water.

The surface-feeding Ducks, as a rule (with the exception of Wigeon, which keep to the tide), spend

* The Sheldrake, strictly speaking, is not a true duck, but is here grouped with them for convenience.

much of their time on fresh water, frequenting rivers, marshes, lakes, and quiet out of the way pools, where they get their chief sustenance, and rear their young. The diving Ducks, on the other hand, affect harbours and estuaries where the water is brackish, and by day keep much at sea. Some of these, like the Scaup and Scoter, seldom come inland, except in severe weather or after a gale.

The surface-feeding Ducks never dive for food further than they can reach without totally immersing the body, though but the end of the tail alone be seen, as is often the case when a tempting bank is just within reach. When in difficulties, however, and as a last resort to escape, they can dive well ; and when wounded this power is an important safeguard. If at such times they *could* fly, they *would* surely do so. When moulting, and devoid of wing power, their action is the same as when crippled. In fine, though they do not dive naturally, they are well able to do so when deprived of other and usual means of escape.

When driven from the nest, all Ducks and Divers are wont to dive, from their anxiety to remain in the vicinity of their eggs or brood ; but this is not a case in point.

The diving Ducks, such as those already mentioned, sink out of sight when seeking their food, which lies at the bottom of the water. When pressed or alarmed they will, like all ducks, and most divers, rise and seek safety by flight alone. They never dive from palpable danger in preference to flying. When wounded and winged their actions are similar to the surface Ducks ; but from constant practice,

when seeking their food, their powers of diving are far superior. Of similar habit in this respect are the Goosander, Red-breasted Merganser, Hooded Merganser, and Smew. The larger sea divers, such as the Great Northern Diver, Black-throated Diver, Red-throated Diver, and now and again a Grebe, are the only wildfowl that will ever trust entirely to their great diving powers, in preference to taking wing. But although they *will* act thus, it is not their universal practice. If cornered, or puzzled between two boats, they will then rise, the Red-throated Divers and the Grebes most often, but the Great Northern Diver not once in a hundred times. These latter are the only species that on certain occasions will dive from danger without being previously wounded or disabled.

The surface-feeding Ducks most frequently met with by the fowler are the Wild-duck, Wigeon, Teal, Sheldrake, and Pintail; then the Shoveller, not a rare bird in Ireland; while more unfrequently seen are the Gadwall and Garganey, the latter only occurring at long intervals. Among the diving ducks the Scaup, Pochard, Goldeneye, and Tufted Duck are common, any others of the genus being rarely met with. The common Scoter (a sea duck) is seen in numbers, but the Surf and Velvet Scoters, the former especially, are very rare in their visits. The Red-breasted Merganser is far the most numerous of its kind; the Goosander occasional; the Hooded Merganser most rare, and the Smew is not often seen or shot. The Great Northern Diver, in immature plumage, is common; the Red-throated Diver more so; the Black-throated Diver

decidedly rare; the largest and smallest of the Grebes frequent. Such isolated occurrences as those of the Buffel-headed Duck, the American Wigeon, Mandarin, Summer Duck, and Ferruginous Duck, to be afterwards noted, need not be alluded to here. These species cross the path of the fowler so seldom, that nothing useful could be imparted as to their habits, and for information concerning them many excellent modern works on birds may be consulted. As a rule, such rare visitants are easily approached, being driven by violent gales or severe frosts from their usual haunts. When first seen they are probably resting and feeding after a wearisome journey, and are oblivious to sights and sounds that would at once scare other fowl. As a case in point may be noted the occurrence of the Red-crested Duck (*Fuligula rufina*), a specimen of which was shot within a quarter of a mile of the large town of Tralee, as recorded by me in "The Zoologist," 1881, p. 143, and is now in my collection.

Strange birds, if fired at without success on their first arrival, will often pitch again at no great distance, and thus afford another chance; after being chased a few times they soon learn caution. It is desirable, therefore, to get as close as possible in the first attempt, and not to fire a long and hazardous shot in the anxiety to procure a valuable specimen. Rather go boldly up with due caution, and the chances are an easily won prize is secured. Let the fowler or shore-shooter never miss the chance of securing a rarity. If a rich man, the pleasure afforded when presenting his capture to a collecting friend, or to some public museum, will

amply repay his trouble ; if a poor man, directors of museums and naturalists will often pay as much, and more, for a *rara avis* as a good day's sport would have put in his pocket. Every fowler should be an observer at the least, if not a practical naturalist. If he collect specimens himself, his sport will be doubly interesting and instructive, though his bag may be sometimes light.

It may be remarked that in many illustrated works on birds, the Divers, Grebes, and most of the diving Ducks are depicted as perched on rocks. Nature is thus outraged in order to show the entire shape and colour of each specimen. This is inexcusable in museums and private collections, where such birds might easily be represented in a swimming attitude. That some divers can shuffle on and off a low bank, or from the nest to the water, is possible ; but the picture of a Grebe standing upright on land or rock, as if this were its usual attitude, is absurd. A Great Crested Grebe or Northern Diver, preserved in a swimming or sitting posture, is handsome and natural : the same bird stuck up on end, like a poodle begging, is highly grotesque. Divers and Grebes, if placed on land, push along on the breast, with neck outstretched, and feet shoving behind, closing and expanding as if in water : notably the Great Northern and Red-throated Divers, the Scaup, Pochard, Goldeneye, and Tufted Duck. I have kept all these in confinement and under observation, and although the latter can sit upright, and even walk about a little, the former will not rise off the breast.

The Manx Shearwater cannot stand upright or

even walk at all, but shuffles along on the breast. Nor can this bird rise from level ground, but must climb up some tiny eminence to spring clear and use the wings. For this reason such birds can rise better from a wave top than they can in a smooth sea.

I have seen the Red-breasted Merganser resting on rocks at half tide at rare intervals; the large Divers, Grebes, Tufted Duck, and Goldeneye, never. Diving Ducks, having the legs placed far back, are ill-formed for walking, though I have seen Scaup and Pochard at odd times squatting on the verge of the water, and then so close, that a couple of shoves would float them. This, however, was with a flowing tide. They would, probably, not risk being stranded with the ebb. The true Ducks take very long steps on land, so long that a waddling gait is produced. Divers, if seen to move when standing upright, raise the foot and place it down in almost the same spot; but it is a habit with most of them to jerk along the ground as above described. Mergansers, however, can use their legs fairly well on land.

A mallard is not such an expert diver when wounded as is the female wild-duck; and will often foolishly waddle out on dry land, thus affording an easy chance to the fowler. The females, however, are gifted with far greater powers of deception, and can dive and hide well. They will creep sily to the shore, and there lie motionless among weeds or stones, till all but trodden underfoot by the searcher. Shore shooters have often tried to convince me that the female wild-duck, when wounded, will remain

under water, holding by the bill to aquatic plants or sea-weed till drowned. They cannot, they say, otherwise account for losing sight of their wounded birds, as they often do. This idea is a fallacy, and is to be accounted for by the fact of the cripple having risen and dived at some spot towards which their eyes were not at the moment directed, and so crept away out of shot, or stolen to shore. Once near the land, they have the cunning to remain motionless, with but the bill and eye above water; at such times every shelter is taken advantage of, be it only a lump of floating weed, or tiny creek. This cunning is of great service to a duck when with young brood or eggs. At such times she will glide softly from the nest, and remain with only the bill above water in the neighbouring reeds and aquatic plants; or else, by diving and reappearing at a distance, endeavour to decoy the intruder from her precious charge. She will also drag along the water as if wounded, and thus court a misleading pursuit.

Nearly every mallard of the duck tribe assumes, more or less, the modest colour of the female for a short time before and during the breeding season, does not regain his coloured plumage till September, and is not finely clad till the beginning of October.

Even at a short distance, it is hard to tell the sex of waterfowl during the summer months (in July especially so), excepting the Wigeon and Gadwall, which retain a patch of white or brown, as the case may be, always more or less visible on the wing. Some adult birds assume a more perfect plumage than others in the winter. Duck and Wigeon do not show much difference when once in mature feather;

but, perhaps, only one male Teal amongst a dozen old birds, will exhibit well the exquisite contrast of green, black, and cream yellow over either wing. Such a different aspect does each species present at different periods of its existence, that our earlier naturalists, and even some of our modern ones, have called the same species by different names. Written descriptions do not always convey an exact idea of particular specimens. An illustrated work on birds, if to hand, will save from cook or cat many a valuable addition to a collection. If shooters who kill scores of wildfowl every winter, would examine their spoils carefully, many additional rare birds and varieties would be recorded. As an instance of this, I may say I have more than once picked out a duck from a friend's bag that had assumed the curled tail feathers and green head of the mallard, which curiosity would otherwise have been overlooked.

The mallards are usually the first to show, and can be seen alone in small groups in early winter; the ducks making a later appearance. Among the home breeding birds, the males will desert the females as soon as they have commenced to sit. In summer they may be seen cruising about, and sleeping by themselves far away in open water, instead of hovering near the nest. This habit is a wise provision of nature, for a couple of ducks near a reed-bed or marsh would surely prompt a search, and perhaps subsequent robbery of the eggs.

The diving Ducks, as before stated, seek their food at the bottom, differing in this respect from

the surface feeders. Their legs are placed farther back and near the tail ; their down and feathers are thicker and more impervious to water, a circumstance, indeed, necessitated by their habit of feeding. Their bodies are rounder, their wings shorter, and their flight very irregular, compared with that of Geese or surface-feeding Ducks. Their pinions beat faster, and show that more exertion is required to sustain and project their heavier bodies. They do not take long flights, neither are they to be seen, like the former, soaring against the sky. Their flight is hurried and anxious ; they never wheel about with the grace and uncertainty of Teal ; but fly straight, and with all haste, to places they appear to have previously chosen. Pintail will at times fly with the irregularity of Divers, but nevertheless have an easy and graceful flight to which no Diver can pretend. A Diver when alighting comes down with an awkward sliding splash, tearing along the surface for several yards, in its effort to overcome the impetus of flight. A Duck rests almost on the first spot it touches ; with outstretched feet and fluttering wings it gradually sits afloat. It may be remarked, that the wing of a Diver beats ceaselessly, when the bird flies ; Ducks will take a skim now and again between the strokes. The force of a Wild-duck on wing must be very great. The keeper of the Tuscar Rock lighthouse told me that Ducks striking the lantern in a gale of wind, had more than once smashed the thick plate glass. Though Divers have much less wing power than Ducks, their voyages when migrating are quite as long. They can, however, rest and feed in mid-

ocean, where a Duck, from its non-piscivorous habits, would starve.

The migration of fowl, and their knowledge of locality, is more or less a puzzle. We all know they take advantage of favourable winds and moon to migrate. It is an accepted fact that they steer their course entirely by instinct ; all else we have yet to learn. Yet this gift at times seems wanting. In thick weather they lose their position and cannot regain it. When anchored in a fog, by night or day, I have heard Geese and Duck calling all round, flying to and fro, and not feeding as usual on the exposed banks. Some say that at these times they are fearful of treachery, and therefore uneasy. I think not, and fancy their reckoning is completely lost. I have noticed Geese in a fog pitch close to houses which, at other times, they would not venture within a mile of. This is especially the case on a dark night, when wildfowl will fly over the midst of populous cities, on the way to or from their haunts. They then take a bee-line by instinct, and shape their course over what on clear mornings and evenings they would not go near. I have heard Wigeon and Geese calling vociferously as they passed above the town of Galway, seemingly among the very chimney pots, and also over other large cities that chanced to lie between open water and their nightly feeding grounds. On clear nights they carefully avoid the abodes of men.

On one occasion a fowler left his house near the river Maigue, co. Limerick (a famous haunt for Bean Geese), to steal on these birds in a fog. Though in view of his windows from day to day in the wide

open land adjoining, they were secure from approach on all sides. He was returning about noon unsuccessful, groping along the bank that led to his door, when within a few yards of home, a large gaggle of Wild-geese rose from outside his garden gate, and within twenty yards of the cottage he lived in!

During thick weather, also, Ducks are found in places they do not otherwise visit. They are not so restless as Geese in a fog; if overtaken near their feeding grounds, they will drift to and fro, till it clears; but if caught out in open water, their actions resemble those of Geese. The best shot at Duck I ever heard of on fresh water, was one made by Considine, fowler and fisherman to Mr. W. Spaight, of Derry Castle, Lough Derg, who realized fifty Wigeon at one discharge, and with a gun carrying a pound of shot. The fowler and his companion had pulled by dawn to Holy Island, where fowl abound ere flying to the open lake to pass the day. No birds being seen, one of the men walked across the island to peer round. He had not left long when a company of Wigeon, perhaps startled by his form, rose off the wet grass and alighted close before the punt, concealed inshore. As my informant described to me, he had merely to pull the trigger with the above result.

The heaviest shot I know of on the tide, was made by Mr. Vincent and his man "Sambo." They obtained one hundred and six Teal at one shot on a southern estuary. The best aggregate day's sport in my experience, was one hundred and thirty-nine Duck and Wigeon, killed by Captain Gould, R.E., and myself, from our punt off the West Coast; the

heaviest shot stopped sixty birds, and four shots were fired.

The best season's fowling I ever experienced was in the winter of 1880-81, when I obtained fifteen hundred of the Duck species on the estuaries of the Irish Coast. The best month brought me eight hundred; the best week three hundred. To do this I lived on a fishing-smack, running at times great risks, in moving from one part of the coast to another, but during the month of January, favoured by severe frosts and perfect calms. Another fowler did even better still some years ago, for he obtained eleven hundred Ducks of various kinds from one anchorage. Mr. A. Vincent, who for twenty years has devoted his winters to fowling round about the coast of Ireland, told me that in 1879, Captain Nugent, R.A., using his (Mr. Vincent's) punt, obtained ninety-six Wigeon at a shot. Mr. Vincent adds, that he has himself, several times, picked up eighty Wigeon and Teal, after one discharge of his largest gun. His best shot at Golden Plover realized one hundred and fifty birds. His best day brought him seventy couple of Ducks. He has also obtained twenty-six Geese at a shot.

Before the era of steam in Cork Harbour, now overrun with shooters, a gentleman fowler, living in that locality, was on one occasion forced to throw birds overboard (though afterwards picked up) to avoid sinking in his single-handed punt. Such was his success in those days.

CHAPTER II.

Habits of Wildfowl—Effects of Weather—Mode of Feeding—Edible Qualities—Provincial Names—Shooting in Wexford Harbour.

NOTHING causes restlessness in wildfowl so much as wind, especially if south or west. North and east winds do not affect them to the same extent. The latter winds bring the birds in the beginning of winter, and after their arrival they are not so disturbed by a blow from these points, as they invariably are by the milder breezes. Gales from any direction will cause fowl to huddle up under a lee shore; they are then fairly tame, and reluctant to quit shelter for the open. In rain and wind they are very restless and alert. The wind lifting the feathers, the cold drops penetrate to the skin, and the birds may be seen constantly smoothing their ruffled plumage to keep out the falling moisture. Geese are never so wild as in a storm of snow or wet. Their feathers are large and loose and blow about more than do those of Ducks. Besides, the latter are oftener in the water, and in violent storms can obtain food in the sheltered shallows. But Geese usually walk out, however hard it may blow, and are therefore more exposed to elements of discomfort.

On perfectly calm water, whether caused by frost

or fair weather, Ducks are invariably tamer than in rough. In the latter they are for ever tossed about, on the move, and consequently watchful. In calms they can judge the depth of the shallows exactly; in rough weather they may reach the bottom one moment with their bills and the next be poised high on a wave. Unlike Geese, they strongly object in a storm to expose the whole body, when feeding, on the land. In a disturbed sea they do not approach the shore in search of food, save when they can discern convenient shelter for doing so. White frosts being the sure precursors of rain and wind, most likely the same day, unsettle *all* wildfowl.

We know what excellent weather prophets they are. When Plovers, and especially Peewits, are heard and seen screaming and wheeling in the evening, it is a sure sign of a dirty night, as this is their usual hour to settle on the ooze or meadows to rest and feed. Curlews (not a solitary one, which will always call in its loneliness) shrieking at night or dusk when the flats are bare, foretell a coming storm. If so inclined and not anxious, they might feed in peace in almost any place they chose to alight on. Diving Ducks, such as the Pochard, Scaup, and Goldeneye, if the weather be settled, delight in a calm, and remain much longer under water feeding, than in a rough sea. In a wave they are tumbled about, although this does not affect them so much as it does surface Ducks, and cannot as comfortably take breath between their immersions. If seen to sleep and rest on a calm day (most unusual to them), depend upon it, it is but a calm before a storm, as most such placid days are after the end

of October. To see them floating with bills tucked in, on rough water, is good evidence it will continue rough for some time. After wild weather they will also rest, but not till they have fed well, unless they are conscious of a yet *more* furious tempest.

If Ducks on being fired at fly but a short distance, and then settle down again as placidly as ever, it is not that they are heavy and sluggish after feeding; this would never cause them to lose their usual caution: a violent disturbance of weather is surely approaching. Ducks, in fact, desert the lakes for the tide-way the very day the water may happen to freeze. Not only can they not rest and sleep on ice with comfort, but, what is more, they are unable to wash, drink, or keep their bodies warm, unless water is available. They will fly from their feeding grounds as usual to the inland waters (frozen during their absence) at early dawn, and I have seen them circle round as if in surprise, and then point off in a body for the distant tide. Ducks seldom alight on ice, but will be seen to sweep low across the surface with hanging feet as though hesitating. Teal now and then will do so, and I have shot them thus with the webs of the feet so stiff and frozen, that they could not be closed till warmed by the hand. Both Duck and Teal essentially frequent inland haunts, and do not visit the tide-way in numbers until obliged by weather to do so, differing in this respect from Wigeon. Pochard, and Tufted Duck, on revisiting their favourite pools and meres after passing the night on the estuaries and salt marshes, will now and again plump heavily down on the ice in the glimmer of dawn, unconscious of their error. I have heard them

whistling through the air past me, and then crash into the frozen surface, as a stone breaks a window ; but they instantly emerge and do not repeat the mistake ; the shivering fragments of ice sounding like shattered glass as they beat their wings on rising to leave.

Curlews suffer the effects of frost soonest of all, by reason of their soft and tender bills, and for the same reason Wood Pigeons feel frost severely. Woodcocks, strange to say, are but little discomforted, and will weather a long and severe frost, showing as plump at the end of it as at the commencement. But they wisely shift their quarters to suit their wants, and this they do earlier than Snipe. The latter will fall off in a week, and in ten days of frost become mere rags of bone and feather.

But they recover their condition even more rapidly, and within a week will be fat as ever. These little gluttons eat ravenously after a term of hardship. Snipe are never so well-conditioned, or behave better to the shooter, than just after a continuance of frost and snow. Like Woodcock, they dislike snow extremely. Both species are scrupulously dainty as regards their plumage, and cannot probe through snow without ruffling and wetting the feathers of the head considerably. Their eyes are placed far back to avoid this contact with mud and wet, as well as to see whilst they plunge the bill nearly forehead deep when in the act of feeding. I never could persuade Cock and Snipe when in confinement to pick up worms when purposely covered with snow. Woodcock being essentially night prowlers, escape wild weather by day,

since they lie ensconced in snug beds of grass and brambles in the woods ; but if flushed, and it blows a hurricane, their immense power of wing (unrivalled almost) will carry them along in any direction as if it were merely a "summer zephyr."

Though Snipe have wonderful powers of flight, they do not equal those of the Woodcock. Their eccentric wheels and twists will now and then play them false in a gale. The wind may be noticed to get underneath the wings, and take them "aback," as they dart upwards. Snipe, like Duck, will rest and feed in prospect of disturbing elements. When the gale comes roaring down, perhaps accompanied by rain or sleet, these birds will rise from their retreat, and whirl about like dead leaves in the murky sky.

I have heard them thus at night shrieking like evil spirits overhead, now on this side, now on that, next like a faint unearthly echo in the gloomy curtain of cloud above ; but after such outburst they soon settle down again in the shelter of their favourite haunts.

That tiny two ounces of fat, the Jack Snipe, is rarely seen careering in a storm ; not he ; he sticks like a limpet to the lee of a "tuft," his little body crouched warm and low in the herbage. If disturbed he will make for another shelter at a short distance, and even return to the same. Who has not seen a butterfly at sea hovering about the rigging in a breeze—an object of surprise and pity ? A Jack Snipe fluttering in the gale, and turned out of his quiet corner, evokes almost a feeling of sympathy.

How slowly and regularly Herons travel to their roosting-places at sunset! When the horizon is suspicious and a storm is brewing, they will come home earlier by half an hour than is their custom. They object, and with good reason, to being caught in a squall, with all sail set, and no reefs to take in. Herons cannot battle at all against a stiff blow. It is ludicrous to see their endeavours to cheat the wind by tacking rather than make a *détour*.

The sudden advent of Wild Swans in places where they are seldom seen is indicative of severe frost; a partial thaw will not send them away, but if milder weather is likely to continue, they will collect on open waters one day and be gone the next. If during hard weather they become restless, a break-up of the frost is imminent: when they first come they are fairly tame and visit the estuaries, but should they "sit at sea," they are preparing for a voyage, having foretold a change.

When Seafoal hang about small islands, or keep close along shore and about the sand-banks, it is generally a sign of approaching foul weather.

"Seagull, seagull, sit on the strand,
There's an end of fair weather when you come to land."

I have often seen, and have myself kept in small pools, several species of Diving Ducks, including the Scaup, Pochard, Tufted Duck, Goldeneye, and now and then a large Diver. None of them walk or ever rest on the bottom when in search of food. They dart along, below the surface, as a Swallow in summer skims above it, the breast just clear of the ground, and the wings about half expanded,

the feet trailing straight out behind but in constant use to steer by, or to push now and then up or down a rock or crevice where the wings could not be unfolded as much as wished. The neck is stretched out straight in front, as when flying in the air, and the bird picks and sorts with its bill as it passes quickly over the stones and weeds. It would be impossible for a Diver to sink to the bottom without using the wings to force it down, as they always do. The wings, in fact, govern their motions in the water exactly as they do in the air, as they fly (for flying it is) up or down through the liquid depths.* They cannot even rise from the bottom, after a long dive, without working the wings rapidly, though only half extended. After a short immersion they can come to the surface with almost closed wings, but never quite so. When they first go down, they throw out great numbers of air-bubbles, and the wings may then be seen glistening like silver, down below, by reason of the air held between the feathers, which do not lie so close as those on the body.

When we see a bird dive, he invariably throws his body down quickly and with force, head first ; this takes him well under water, and enables the wings to be then used with effect. Unless wounded, no bird would ever try to dive save with smooth folded wing. I have remarked Divers at the bottom of a clear pool, when looking for food, keep a pretty straight course, turning the bill from side to side as they cruise along, and leaving a long streak of

* The wings of most Diving Ducks act as fins under water and as wings in air. This their blunt and stiff form well permits.

bright globules of air behind them, which gradually lessen in number, and just as they seem to diminish completely, up pops the bird ; then, if alarmed, it dives again at once, and no bubbles appear. But if the Diver be allowed a few seconds' rest, and then disappears of its own accord, the bubbles again appear in streaks and streamers after it, seeming to arise from every part of the body. From this I conclude that all Divers, more or less according to their aquatic powers, are enabled to retain or eject air at will to assist them in their pursuit of food. A Diver full of air, even with wing action would find trouble in reaching the bottom and remaining there, and for that reason probably ejects air in the action of diving. On the other hand, when all air is dispersed from body and feathers, he would be heavy, and not so well able to rise or fly through the water. It is this power of ejecting air that must permit Divers to swim with bodies submerged, as most of them will do when alarmed.

As regards the edible excellence of various wild-fowl, of all the Ducks we are familiar with in these islands, none equal the Pintail for delicacy of flavour. Shovellers, if shot on fresh water, I would place second ; they are always in good condition, and I have seen fat on a Shoveller fully an inch thick ; but their occurrence, though not very uncommon, is almost too much so to demand attention as a dainty from any but an "epicure." Teal are next in repute, and, curious to say, are just as good whether procured on salt or fresh waters.

Then comes the Wild Duck, of which the mallard is least esteemed, as being the coarser flavoured of

the two sexes. Wigeon I place fifth. These birds, when shot on the tide, are never really good, but, when obtained inland, and are entirely marsh and meadow feeders, they are excellent. They, however, at all times lack the game taste of Pintail, Teal, or Duck, and their flavour is somewhat coarse and strong in comparison.

Among the Diving Ducks, Pochard are much the best, and, when killed on the inland lakes, are as good as Wild Duck, if not better. But on the tide their flavour is certainly strong.

Scaup are only third-rate as food, and have a tendency to be oily, which Pochard have not. They are well fed in all but the very hardest frost. The Tufted Duck and Goldeneye are very inferior eating, and Mergansers, from their fish diet, are uneatable. For the same reason the large Divers may rank with Cormorants.

Among the Geese, Brent are the best of all; but a young Bean Goose need not be despised, especially if shot inland about the end of October or beginning of November. This bird and the White-fronted Goose make capital "giblet soup" at all times, even the old birds. I should advise the Bernicle to be left untried. But no Goose, except a Brent, unless a very young bird, is fit to serve up whole—even to a rival shooter; for, as the country folk would say, "Pat Hegarty's leathern breeches" would make a better dish.

Swans are not fit for food, except, perhaps, a young cygnet, which may be experimented upon as a roast; but I would sooner make a present of it.

As to Plover, the Golden stands ahead of all

others. Its flavour is most delicate. I have, indeed, heard epicures declare that a Snipe is not better, and has the disadvantage of being smaller. The Green Plover, or Peewit, is capital in a pie, with other aids, but is not nearly so well-flavoured as the Golden.

The Grey Plover is better than the Green, but, from its sea-coast habits, is inferior to the Golden. All wildfowl have a stronger taste when procured on the tide, than when their food and haunts are inland. But to accuse Ducks of being *fishy* when near the coast is absurd. No Duck, properly so called, could catch or hold a fish in its bill as can a Merganser with its serrated beak. What often gives the Wild Duck a bad reputation is the number of Mergansers, Scaup, Goldeneyes, and Shelduck (the latter are vile as food), that are indiscriminately sold as Duck to the unwary, by cunning or ignorant dealers. If Duck, and especially Wigeon, are strong in flavour from their tide-feeding habits, let the cook put an onion, a walnut, or milk, inside the bird when cooking it, and the improvement will be apparent. Coots, if skinned, are capital when first driven down to the tide by frost, and are well worth a shot if met with inland. Curlews are good at the end of harvest time, a young bird excellent; but they must be obtained so far from the estuaries, that they do not fly thither to feed. A Redshank is not the best of eating; but of the smaller waders, the Knot is best of all. Mr. Warren, of Ballina, co. Mayo, says the Redshank is the only shore bird he does not consider worth cooking.

The following local names for different Wildfowl

will be useful in enabling their identification, should word be brought that a certain fowl has been shot, or is offered for sale by some poor shooter, who only knows his capture by its provincial name :—

Sheldrake	Burrow Duck, Bar Duck, Shell-goose, Sand-goose, Mussel Duck.
Wild Duck	Mountain Duck, Coarse Duck, Heavy Duck, Mallard, Harvest Duck, Gross Duck.
Wigeon	Golden-crested Wigeon, Yellow Head.
Pintail	Spear Wigeon, Lady Duck, Sea Pheasant.
Gadwall	Grey Duck, Brown Duck.
Shoveller.	Scupper-bill, Spoonbill, Shovel-bill.
Longtailed Duck	Long-tailed Sheldrake.
Teal	Little Wigeon.
Scaup	Bridle Duck, Blue-bill, Black Diver, Diving Wigeon, Spoonbill.
Pochard	Red-headed Diver (or Wigeon), Poker, Bog Wigeon, Winnard, Diving Wigeon.
Goldeneye	Magpie Diver (or Wigeon), Morillon. (The young and females,) Whistle-wing, Painted Duck.
Tufted Duck.	Little Black Diver, White-sided Diver.
Scoter	Black Duck.
Merganser.	Saw-bill (from its teeth), Shelduck (inland only), Crested Diver, Fishing Duck, Sand Harlin, Spear Wigeon, Scale Duck.
Smew.	White Wigeon, Weasel Wigeon, White Nun.
Goosander	Diving Goose, Fishing Goose.
Bean Goose	Bog Goose.
Brent Goose	Bernicle, Sea Bernicle, Black Goose, Sea Goose.
Bernicle Goose	White-fronted Bernicle, Land Bernicle, Northern Bernicle, Clakis.
Whitefronted Goose	Tortoise-shell Goose, Barred Goose, Laughing Goose.
Graylag Goose	Swan Goose, Grey Goose.
Great Northern Diver. } Red-throated Diver . . }	Speckled Diver, Sea Loon, Ducker, Hol-lands Hawk.
Grebes (the larger). . . .	Loons.
Little Grebe.	Dipper, Dabchick, Puffin (inland).
Golden Plover	Grey Plover, Black-breasted Plover.
Grey Plover.	Shore-cock, Sand-cock, Sea-cock.

Green Plover	Black Plover, Peewit, Lapwing, Phillipene.
Oyster-catcher	Seapie, Sea Mag.
Heron	Crane.
Bittern	Bog Drummer, Mire Drum, Brown Crane.
Whimbrel	Jack Curlew, May Bird, Little Curlew.
Godwit	Godwin.
Solitary Snipe	Little Woodcock, Double Snipe, Silent Snipe.
Redshank	Red-leg, Pool Snipe, Shore Snipe.
Purple Sandpiper.	Rock Sandpiper.
Avocet	Scooper, Awl.
Ibis	Black Curlew.
Sandpipers	Sand Snipe.
Dunlin	Sea Lark, Mudlark, Purre, Stint, Ox-bird.
Golden Eagle	Ring-tailed Eagle, Black Eagle.
Sea Eagle	White-tailed Eagle.
Osprey	Fishing Hawk, Sea Hawk, Fishing Eagle.
Peregrine Falcon	Rock Hawk, Cliff Hawk, Blue Hawk.
Manx Shearwater.	Mackerel Cock.
Black Guillemot	Rock Dove.
Puffin.	Sea Parrot, Collahene.
Tern	Skur (a general name for the genus)—some- times Spurre or Sea Murre.
Chough.	Sea Crow, Red-legged Crow, Red-billed Jackdaw, Cliff Daw.
Cormorant.	Calliach or Colliagh Dhuvs (<i>Anglicé</i> , Black hags).
Green Cormorant.	Crested Cormorant, Skart.

Some birds I have omitted as being either too common or too rare to mention. Every one knows that a Jack is called a "Half Snipe," and the common species "a Full Snipe;" and that such rare birds as the Garganey or Ferruginous Duck are not likely to have a nickname.

As an illustration of how wildfowling is pursued by the professional fowler in Ireland, Wexford offers a good example on the east coast. I say nothing of the west, for little single-handed punt-shooting is there attempted, in consequence of its immense estuaries and unsheltered bays.

The fowlers of Wexford, of whom there are seven

or eight, nearly all live on the Point of Rosslare, a bar of sand hills three miles long that protects the harbour from the sea. From this "coign of 'vantage" these men can spy the whole extent of ooze and water on which the birds are wont to alight. Their fowling is still very primitive, most of their big guns being ignited by flint. The punts, or "floats" as they are there called, are about fifteen feet long, and twenty-eight inches wide amidships. The sides are nearly upright with little flare, the stem, stern, and plank all round being nine to ten inches high. They have little or no spring in the bottom, so that they are bad boats in every way. These craft are also quite open and devoid of any deck, either fore or aft. Though built very light as regards wood and knees, the guns used in them are of fair size, and carry from a pound to a pound and a half of shot. These are made fast to a ring in the bow (for stem proper they have none) by light breeching ropes about two fingers in thickness. The barrel lies in a deep groove on the upper surface of the small bowpiece that does duty for stem. The breech and short stock rest on a plain thwart, and between two pegs to keep it steady and fairly in the centre of the float; the muzzle projects a foot or more beyond the bow.

The shooter lies face downwards, and paddles over either side if the water be deep; but if shallow, he pushes with two short setting poles. He directs his craft as straight on the fowl as he can steer her, and pulls the trigger by hand when in shot, dropping at the same time his paddles or poles, which, as usual, are secured by strings to the gunwale. The elevation of the gun cannot be altered, and a flying shot is wellnigh impossible. The Wexford men, never-

theless, bag large numbers of fowl, mostly Wigeon and Brent Geese, which latter, as usual, are misnamed "Bernicle." The vast extent of ooze inside the bar is seldom covered by more than two foot of tide, and, should the wind be strong, the long-weed lays the water smooth.

Were it not for the extreme safety of this harbour, such tiny toy shooting floats could not be used. When the birds gather on an island of slob or bank of weed at about half-tide, four or five floats will sometimes approach them together, drawn to the locality by the sight of the shot from various parts of the harbour. The oldest or most experienced fowler then fires first, and the others follow almost at the same moment. The spoil is afterwards fairly divided. Should two fowlers "set" by any chance to the same company of fowl, and there be an odd bird when all are picked up, the owner of it, or he who takes it, gives his companion a charge for his big gun to set matters straight between them. A. Bent, one of the oldest Wexford floatmen, once told me he remembered six shooters setting to Wigeon at the same time. They fired together, and picked up one hundred and fifty-four birds as the result of the general assault.

From three to four hundred birds apiece is a good season's work with these men, but they toil very hard for a bare existence thereby in winter. Dark or light nights, out they all go; if they cannot actually see the birds, they fire to the sound of their guzzling, so well do they know the creeks, and where to find their game. This leads, however, to great danger, and sometimes to a serious accident. A floatman one night in 1879 saw what he took to

be in the gloom under the land two bunches of Wigeon, and fired at the half he thought the best. The supposed birds were, alas ! two float-shooters, lying low in their boats on the look-out for fowl, that were piping all around. That winter's night the fowler in question towed astern of him a punt with a dead man in it, slowly threading his way in the dark through tortuous channels to the shore !

The Brent Geese being mercilessly followed in the harbour, rest at high water in thousands outside the bar, where a heavy gun and large safe punt might do wonders, for there these cockle-shells never venture. But, as in most places in Ireland, these men are banded together, and any stranger, to obtain sport, would have to empty his bag for their benefit.

The first fowler who ever visited Wexford with a large gun, now many years since, lived on a smack in the centre of the ooze, and the birds being then tame and undisturbed, he did great execution. From his isolated position and lonely life this shooter was nicknamed " Robinson Crusoe " by the neighbouring gentry, and to this day the old fowlers, never having heard of De Foe's immortal work, recount the deeds of one " *Mr.* Robinson Crusoe," and how he slew the Geese and Duck of Wexford. Though several thousand acres have here been rescued from the sea, it would yet be the safest and best fowling ground in Ireland were the birds allowed to feed even on dark nights in peace.

But they get no such chance of quiet from the floaters, who cannot be brought to see what great mutual benefit would accrue from such an armistice.

CHAPTER III.

Surface Ducks—Duck and Mallard—Flighting—Flappers—Albino Mallard — Hybrids — Wigeon — Their Habits — Good Shots — Wigeon in Decoys — Nesting — Pintail—Shoveller—Gadwall—Teal—Garganey—Sheldrake—Ruddy Sheldrake.

THE WILD DUCK (*Anas boschas*) is common to every part of Ireland. There are, however, two varieties, the home-bred birds, or, as they are sometimes called, "mountain ducks," and the emigrants that visit Ireland annually. The former are not so well formed as the latter, being heavier in weight, and of a clumsier shape; the visitors, from their active habits and wing-exercise, are smaller and neater in form. The home-bred ducks are the best-conditioned till frost, when, from being of a less hardy nature, they suffer most. The latter, on inspection, can easily be distinguished from the strangers; they do not affect the company of the others, and keep apart. I have shot half a dozen duck and mallard from one "paddling," and, putting them aside, have subsequently obtained as many more some miles off; the former, home-breds I conclude, each weighed just a half-pound heavier than the latter, presumedly the foreigners. They are called "heavy duck" for this reason in some localities; in others, merely to distinguish them from the smaller species, such as Wigeon and Teal. This difference is so well known

to fowlers and dealers, that sixpence is added to the price of what are termed the large mallards, this extra amount being expected and given by buyer and seller respectively.

Though Wild Ducks often nest in the large lakes they rest on till late in the spring, they prefer woods and mountains for that purpose near at hand, bringing their young broods to the water by night. On small pieces of private water, well guarded, they know their safety, and usually nest on the spot. I have twice found a Wild Duck's nest in a hollow tree overhanging a stream. For two consecutive years a Duck built her nest in some ivy at the top of an old church on Holy Island, Lough Derg (Upper Shannon), some thirty feet from the ground. The first time she carried the little ones safe to the water. The second time her eggs were robbed by boys searching for jackdaws' nests, and were brought to me, alas ! as a prize.

Mr. Blacken, gamekeeper on Lord Shannon's estate (Castle Martyr, co. Cork), told me he found a few years since a Wild Duck's nest in the fork of a large Scotch fir, thirty feet above the ground, with eleven eggs in it. She hatched all out safely, and took them down by night ; how, my informant says, he has often wondered.

Duck and mallard, among their tribe, are the slowest to take wing. They will at times stand on the edge of a bank, with necks craned, for half a minute ere flying, and give the fowler a good chance of creeping many yards nearer in shot. Should you, when looking after Duck on land, see fowl alight or swimming, never, if you can avoid it, creep

straight towards them; rather take some object, such as a tree or mound, for a guide to march on. Walk or creep, as occasion requires, out of sight, and when opposite to it, face direct for the mark first fixed on. If you trust to where you *think* the birds are, you will go astray. By acting as described you may find your game to the right or left, on reaching the water, and still within shot. If, on the other hand, you make forward at first, you have but one chance, and that only in front.

Admirable early fighting may be enjoyed on the inland ponds and private marshes of Ireland. The lakes are too large for this. I have often shot from fifteen to twenty-five wildfowl on a lonely piece of water at daylight in the short space of half an hour. The birds, after feeding all night in various parts of the country, fly to such places for rest and shelter during the day. About dusk, after long quacking, they will rise and leave almost simultaneously, spreading over the adjoining lands to feed through the night. They begin to return in twos, threes, and small bunches just before daylight, for the first hour of dawn, by which time most of them that intend to come have arrived. The chief requisite to ensure success is a windy morning, as then the birds pitch on the sheltered side of the water within range, while at the same time the wind blows away the smoke and report of the gun. On a calm morning success is uncertain, as the fowl pitch all over the water out of shot; the smoke hangs, the next visitants see and smell danger and avoid alighting.

A favourite plan for outwitting Ducks and Divers, much practised on the large inland lakes of Ireland, is this:—In the bays that fowl are known to frequent for food, or shelter from storm, the gunners are in the habit of erecting “blinds.” These are usually made of furze bush on land, and stones on shore; the most inland shelter may be a couple of hundred yards from the water’s edge; the next two divide the space, and the last is close to the water. The shooter lies in wait behind the first or inland screen; he makes no move until he sees the fowl almost within shot of the stones built upon the beach. If Divers, he runs with all haste, when they are down, from screen to screen. If Duck, he stealthily creeps, watching his chance to reach the shore screen as the birds feed or sleep.* A long wearisome wait is often well repaid by a good shot. These blinds are in some places cleverly arranged to branch out on either side from the one inland, in the form of a pyramid, the base along the shore and the apex being the first shelter. Then, by this means, if the birds swim to right or left, the shooter can nevertheless get in position for a shot. This is luxury compared to what the poor coast fowlers endure. These men, chiefly for profit, and from the Irish love of sport, go out night after night on the flats in the severest weather, and, with a small shovel they carry with them, throw up a shelter of mud. They then lie prostrate for hours, waiting for the fowl to feed up in shot with the flowing tide. Thus do these mud-squatters remain in slime and ooze. They often

* Goldeneyes and Tufted Ducks are the chief victims, besides a good share of Duck and Teal; Wigeon but seldom.

get no shot ; or perhaps, just as one may be near doing so, another fowler, lying close by, sees his chance, fires, and spoils the hopes of all the rest. They seldom fire at over twenty paces, and I have known one lucky shooter obtain eighteen Wigeon at one discharge of both barrels. Many of their guns have the end of the barrel blown off, as they often get choked with mud in this night work.

True Ducks swim high and buoyant on the water at all times, even when followed and alarmed. Diving Ducks, when suspicious or frightened, at once sink the bulk of the body, and so swim away, looking uneasily round meanwhile. Of course both species rise on wing if unduly pressed.

When a wounded or dead duck is retrieved, it is remarkable how high and dry it floats. If water be sprinkled on the back, it runs off in little drops and streams ; it cannot be made to soak in, or penetrate the plumage. This is by reason of the oil that all waterfowl use when dressing their feathers to keep them pliable and waterproof. They can be seen to refer to this oil-gland every few seconds, when engaged in making their toilet. A few rubs removes this coating, and water will then lie among the plumage and soak to the skin.

All fowl in heavy rain are subdued, and sit bunched up, looking draggled and miserable. I imagine this oily protection is beaten off, and the fibres of each feather separated by the ceaseless falling drops, though a wave or splash of water from the hand would glide smoothly over their plumage.

A Duck is lighter in proportion than a Diver. That the latter can sink its body—take the Great Northern Diver, for example—when pursued is curious and puzzling. Whether expelling air assists it to gain and retain this position is more than I can say. I cannot suggest any other explanation. A wounded Duck will often *rest* with only the bill and eye above water and the body sunk, the top of the back almost on a level with the surface, and just beneath it; but I have noticed at such times the feet keep up a gentle action, which probably enables the bird to retain its position.

Great numbers of “flappers” (young wild ducks) are shot on the large inland lakes so numerous in Ireland. There are many islands on these waters covered with grass and scrub, in which a few birds nest every year; but the majority of young ones that are shot about harvest time have been led down from the mountains by their parents. When out late, trout-fishing, I have more than once seen a string of young paddlers tumble off a bank into the river. They at once splash, sport, and swim like old birds. One June night, after playing and gaffing a salmon that was not landed till moonlight, I was passing through a village on my road home. The good folk were all abed, except a Wild Duck and her tiny straggling brood, that were trotting through the street which led to the water at its further end. In five seconds not one was to be seen, nor with the assistance of a landing-net could I make a capture. Whether on land or water they vanish with marvellous alacrity in times of danger. When brought up with tame Ducks their wild nature is always more

or less dominant, and though just out of the shell, they will hide and dodge into shelter, such as tufts of grass, on seeing a human form.

As an instance of how Ducks will breed when protected, I may here relate that in Col. Purejoy's demesne, near Cappawhite, co. Tipperary, on a pond of but four acres, three hundred "flappers" can often be counted by the middle of July. The old birds do not, however, lead their broods out from the wood in which the water is situated till they are of some size, for the Pike snap up the tiny ducklings at a sad rate. On this pond, in an hour's shooting with three guns, seventy-eight fowl, consisting of Duck, Wigeon, Teal, Pintail, Shoveller, Pochard, and Goldeneye, were killed in January, 1876. Since that year the early flighting has fallen off, the best bags being forty-five in 1879, and thirty-eight in 1880. Before 1876, fifty was an ordinary morning's sport, and sometimes more. Though so many Teal are shot on this water, and the facilities for nesting are so favourable, they are never known to breed near or bring their broods to it; perhaps they instinctively fear the Pike (which abound), or they may object to the companionship of Duck on these occasions.

The only uniformly coloured variety of a pure bred Wild Duck I ever saw is an albino in my collection, which was shot on the coast of co. Cork in December, 1880. It is about half as large again as a white "call-duck," which I at first supposed it to be. I, however, sent it to Mr. Harting for inspection, and he considered it an albino wild Mallard. He tells me he never knew an instance of an albino Wild Duck

before, but that a friend of his shot a white Red-throated Diver some years ago.

Amongst other species of birds albinos are not very unfrequent. White Curlew, Woodcock, and Snipe I have occasionally seen. White Blackbirds and Sparrows are more common ; and Mr. Harting says he has seen white varieties of the Knot, Redshank, and Ringed Dotterel. I have also seen a white Puffin (this was shot on the Skelig Rock), and a white Guillemot, Swallow, Jackdaw, Green Plover, Woodcock, Sparrow Hawk, Magpie and Herring Gull.

The handsomest hybrid duck I have seen is one between a Pintail and a Wild Duck. It is a fine large bird, with the tail-feathers of the former and the body-colouring of the latter. It is in the collection of Mr. Law, of Youghal.

THE WIGEON (*Anas penelope*) is abundant in suitable spots throughout every county in Ireland, but has never to my *personal* knowledge remained to breed. I have taken great pains to find a Wigeon's nest in Ireland, without success, though I have searched at least fifty lakes to that end. That they do breed in wild out-of-the-way spots is very probable. I have seen young birds and females once or twice together on Lough Derg (Shannon), Lough Ree, Lough Corrib, Lough Mask, and Lough Conn, when fishing in the early autumn.

At Westport House (Lord Sligo's) two pairs of pinioned Wigeon were kept on the lake that were taken in an English decoy. They bred regularly for some years, as I am informed by Lord J. Browne, but one severe winter (1878-79) the water

was completely frozen, the townspeople skated daily, and both old and young birds were driven into Clew Bay, never to return.

They are to be seen on all the estuaries, lakes, bogs, and marshes in the island, but far more abundantly on tidal waters than inland. They sit in such dense companies, fly in such dark sweeping clouds, and gather so favourably at times for a shot from a punt gun, that one good chance recoups the shooter for a week's idleness.

As the deer to the stalker, so are Wigeon to the Duck-shooter. He views them with eagerness checked by anxiety. Let us watch him. What a sight! Four to five hundred Wigeon feeding, quarrelling, and calling on the last patch of bank yet uncovered by the flowing tide, as many more swimming up to partake of the feast whilst they may; others flying a few feet in the air and pitching where they can better find space to wedge in. As the patch visibly diminishes, the tiny waves rippling higher every moment, the busy crowd get even closer to one another, and gradually huddle together in one *black swarm*. What alternate hope and fear now fills the fowler's breast! He is yet three shots too far. Will the birds be floated and so opened out ere his straining companion can pole him within shot? Will they fly? Will some jealous shore-shooter fire to rise them? Lastly, the awful but just possible chance of a miss fire—the cruellest fate of all! Meanwhile, men and punt push nearer, and seem, from our position, to creep among the very fowl. They are exactly between us and the birds, which causes this effect. “In Heaven's name, why

does he not fire?" says a looker-on. "No hurry, no hurry," exclaims an old hand—too old for such doings himself, but with eye bright and keen as of yore. "They are within shot," the veteran adds, "but the birds have not their heads up yet;" for no fowl can spring without first raising the head and stretching the neck. Seventy yards is a nice distance, but sixty is better, and gives fewer cripples. The shooters know that, saving a missfire—which may Heaven forefend!—they have as good as thirty couple of fowl in the punt at this moment. Their heads are up. Now! now! for the love of——. Ah! well pulled; just as they lifted too—a ticklish job, but the right way to do it. When fowl are very thick on smooth water or level ground, the outside rank protects the inner from the charge, if taken as they sit. "A *close* shot is a *good* shot," remarks one brother to the other, as they paddle ashore an hour later with seventy odd Wigeon and Teal to their credit.

Some who read these lines may recognize the brothers, and more than one, perchance, the very shot alluded to. To fire a small gun carrying three-quarters of a pound, on an occasion as that referred to, is like throwing your hat at the fowl. For a big shot you want a big gun, which no single-handed punt could carry. It is, however, not so much the total number of Wigeon in a company that promises a good return, but the way they are placed. I have killed from seventy to eighty birds when the aggregate did not exceed two hundred; and at other times obtained but twenty or thirty when perhaps a couple of thousand were fired at. The companies of Wigeon are so immense off the coast of Ireland,

that though the wind be from you to them, I have heard the roar of sound transmitted a full mile and more as they rose or pitched. The accumulation of small noises is wonderful, when one of the components would be inaudible. This is well shown in a shoal of sea-fish, such as sprats, the sound caused by their mouths at the top of the water giving the idea, though fifty paces distant, of heavy pattering rain.

When fowling on the tide, the Black-backed Gulls are as Vultures of the sea, and scent plunder from afar. They will attack a disabled Wigeon or Teal, and tear it to pieces in a few seconds, ripping open the breast as with a knife. Many a time have they directed me where to seek a cripple, by hovering over the spot, only to find its mangled remains floating on the surface. They may be often seen to lift their prey with the bill, a few yards into the air, only to let it fall. They would like to carry it to the land to feast at leisure, but their feet not being formed for grasping, they cannot retain a hold of their capture.

The actions of Wigeon, when unsuspecting and playful, are very interesting. They may be observed dressing their feathers, washing, tossing the water about, and nodding and bowing *vis-à-vis* like cocks fighting. The old yellow-headed males may be seen chasing the others, or ploughing and splashing through the water after one another, and causing great commotion in the ranks. Some will stand up on end, the treading feet assisting them to maintain an upright attitude, without which the wings could not be fanned and dried clear of the water. At night Wigeon are very deceptive, a dozen birds

often making as much noise as a large company. Unless the fowler can plainly distinguish their outline on the bank, he should not fire in the hope of killing others he cannot see, but may think are with them. A large company of Wigeon feeding in earnest are oftentimes the most silent; though when in shot, or nearly so, you can discern the low croaking purr of satisfaction emitted by the hen, the soft quiet whistle of the cock, and the rippling bills as they shovel greedily along the ooze. Duck and Wigeon, when they get the chance, are as fond of feeding by day as by night. It is an error to suppose that it is invariably after dark the latter seek their food; they prefer night, because they are then safer from disturbance in most places; but when left alone in spots where food abounds, they will feed with avidity during the day. They are driven to the flats as being most secure from molestation; but at high tide, on a lonely shore, or on the borders of quiet inland lakes, I have many times seen Duck, Wigeon, and Teal, happily nibbling the short grass of the adjoining meadows. To inland wildfowl, a wet grass field is an allurement at night that is seldom neglected.

Numbers give security to fowl at night. A few feeding by themselves feel lonely; they stop continually to whistle loud and shrill, in the hope of attracting others, or in expectation of an answering call. Now and then they will listen, silent and uneasy; at such times the slightest noise puts them up. Birds calling frequently by no means show that they are part of a large number, or are busy feeders, and so careless of approach. It is always

desirable to select for preference a company where the "whee-oh ! whee-oh !" sounds low and plaintive, now singly, then in subdued chorus, and not loud and querulous. The former are in all likelihood contentedly engaged ; the latter but a few anxious stragglers from food and companions.

Night-shooting is likely to drive fowl from their haunts, making them wild and fidgety. If you happen to be the only shooter in the vicinity using a punt and gun, by all means let the Wigeon feed in peace by night, and then by day you will find them satisfied, and fairly easy to approach. If rivals are about, and nightwork is necessary, make sure you face the moon ; any other way of pointing for a shot is mere waste of time. Should you neglect this simple and obvious rule you *must* fail. You will *hear* the birds flutter up within a few yards, yet never *see* them. The rush of their wings will tell how near you were, and prove what good work might have been done had you gone aright. Should there be a young and jealous shooter in the neighbourhood, eschew night-shooting as an evil deed. This fellow will come gaily down with the light behind him, see you looming in the shade, and thank Heaven for such a fine chance at those very wild Wigeon he has so often followed unsuccessfully, and promptly send a pound or so of large shot hurtling about your ears, though possibly his bad aim may save your life.

This once occurred to me, but, fortunately, being missed, I remained motionless, lying down, when the would-be fowler pulled hastily up, expecting to reap the fruits of "a most successful shot," but in

reality to hear a little "gentle" expostulation from the supposed bunch of Wigeon! A fowler who knows his trade does not consider he can see birds at night plain enough to shoot till they are within easy distance. It is then either a clean miss, or a kill and few cripples. He also considers he is drawing well within shot when he can hear the "purr" of the hen Wigeon. A very slight breeze will blacken the water, and the banks then show in relief, clear and shining, and most favourable for aiming.

Moonlight nights really favourable to shooting are most exceptional. I have shot whole winters without securing a dozen such. Four or five in a month are as many as you may expect. A bright clear night with the moon overhead is not good; you have then little shadow from which to approach the fowl. Four or five days before or after full moon is better. Irregularities in the ground, elevation of the gun, and other matters, cannot be judged by night as by day, and cause many a failure. However clear the night may be, it is *useless* to look for a shot on the water at high tide and with the banks covered. All you can see will be the sparkling ripples glancing in the moonlight caused by the motions of the paddling fowl. You will hear them splashing and calling in all directions, in front, behind, and on either side, but you will not see them. With finger at trigger, you expect to get a shot every moment, but such expectation is delusive. The fowl are scattered about in all directions after feeding, and are well aware of your presence. You might, perhaps, get five or six at a shot if, in desperation, you fired at such times, but

you would alarm all the others. They would, if left quiet, greedily attack the slob when it next showed, and perhaps afford an admirable chance at break of day—the best time of all others for a heavy bag. Twilight is also an excellent time for a shot. The birds can be seen long after the usual hour if you are pointing towards the sunset, or the glow left in the sky. As in moonlight, the fowler himself is obscured in shade. A heavy shot at such times, with the fading light, does not, however, make retrieving the cripples an easy matter, as is the case with the coming day. You can only see your “pensioners” in the broad road of reflected light: if they swim astern or to either side, they will be lost sight of in the dark shadow.

There are many creeks and flats along the coast where the Wigeon feed every night in dense packs.* At first glimmer of dawn they fly to sea, there to rest and sleep through the day. About dusk they get uneasy and restless, and again make for their feeding grounds, at first in small trips, then

* Thompson writes that soon after the introduction of a punt gun to Lough Larne, co. Antrim, sixty-six and again seventy-six Wigeon were obtained at one discharge, and that eighteen more were picked up by another fowler after the last shot, making ninety-four in all. He adds that the greatest number of wildfowl killed in Belfast Bay was about the year 1830, when one man living in a smack among the fowl obtained three hundred and thirty-six Geese, Duck, Wigeon, and Teal in a week. Since then the most shot by one fowler in a week might be from two hundred to two hundred and fifty wildfowl, and often less than fifty. This shows us how abundant the fowl must have been at that time, when small guns, carrying perhaps a pound of shot, were chiefly used. With the heavy weapons now common in Ireland (I know at least fifteen that shoot twice as much as a pound, and even more), what havoc would have been caused!

in larger, and finally the main body are to be heard, though not seen or shot at, whistling in thousands overhead. After noticing the flats bare of fowl in fine weather day by day, and worrying them to little good at sea, bear in mind the first gale is your chance. The harder it blows the better, if you can live in it. You will then find the channels packed with Wigeon, till the banks are topped by the tide; and they will stand several shots ere leaving to ride it out in the pitching sea. Never omit to start up a creek lying down, as when setting to birds; unless in this position of ready, you will now and then come so suddenly on the fowl as to lose a shot. The fiercer the wind the closer Wigeon will huddle in a channel, or under shelter of its windward bank. To get a shot is then a mere question of being able to steer your course, and prevent being drifted on the leeward shore. You should be still surer with frost and a north-easter. Wigeon are then very tame, and you may observe them standing alternately on either leg, one foot being drawn up with a shiver to the warmth of the body, while they endeavour to smooth their ruffling feathers by facing each whirling gust. Though in miserable plight, don't think of pity. Take them whilst you may. They will afford you many a weary chase and empty bag on days to come.

What fowl there may be at sea, or driven outside by firing, will, on a wild evening face shoreward earlier than is their wont.

Without a retriever you will surely lose your birds, for even if dead they are hard to pick up in the dusk, and if wounded impossible. You cannot

grope about for them whilst others are passing overhead. The short fifteen minutes fighting lasts, is too valuable to waste in searching for a cripple in grass or bushes.

Place yourself and dog then behind a bank, looking in the direction the fowl will appear when making inland. You must choose a position over which you know they cross in the morning flight. They will return the same way and face you if posted aright. Should the gale be against them, they will travel low over the land, just topping the banks and hills. If the wind is favourable they skim along with extended wings, high, and often out of reach. If calm weather they are up in the sky, and can oftener be heard than seen. In all cases avoid firing at fowl coming *towards* you, take them sideways overhead, or better still when just passed. By shooting thus the shot will not glance off, or encounter the dense mass of down and feather presented by an *approaching* bird. I have seen this well exemplified. One of the surest game shots I ever knew, took a stand with me at flight time, having never tried such sport before. He fired eleven double shots and killed each bird one after the other without a miss, with the second barrel. He failed to stop any that came towards us, and in every instance they had passed overhead.

In bright and early moon the flight is late and uncertain. The fowl will then straggle in at all hours up to ten o'clock, when they usually decide to visit the flats, or swim above them, till their food is exposed. At dawn their movements are reversed. On fine still mornings the main body quit their

haunts before it is daylight, others following later. After a boisterous night they rest on the flats, or float over them longer than usual. They are loth to face the storm, and afford a good chance to the early fighter as they fly to sea ; and doubly so, if forced to battle against the wind.

It is curious how wildfowl frequent and desert certain bays, though their food may be abundant, and persecution slight. Many old fowlers now living declare that they recollect when Wigeon were rarely met with on the south-west coast of Ireland between Loop Head and Cape Clear ; and that Geese were then more plentiful by far than now. Thompson tells us that Buckle (Colonel Hawker's man) killed twenty-five Brent at a shot in Dingle Bay, a place which they are now never known to favour, though plentiful a few miles distant at Tralee. As to Belfast Bay, and the shooting there years ago, I may further allude to it to give some idea of what it is now in regard to its wildfowl. Mr. L. Patterson writes to me :—" One of our most successful local shooters, with punt and gun, procured four hundred and fifty fowl—that is, Duck, Wigeon, Teal, and Geese in 1880-81, the most favourable winter known for many years. So near a large town, and between well-inhabited shores on either side, clothed with villages and small towns, Belfast Lough would still be what it once was, were it not for the increased shipping—a splendid place for wildfowl ; its natural advantages of formation being such as to entice these birds in large numbers even now, though so near a town of a quarter of a million of people, and a great highway for

vessels. Bear in mind, the more stormy the evening the better for fighting, if you care to try it at the day's end.

Wigeon are far more nimble on their feet than Duck, and give a very quick chase, if only winged, on mud or shore. It is their habit to call as they fly. Duck and Teal, when passing over others below, will also do so, but not often. If Duck are put up they call loudly from fear, and not as a natural habit. The note of the female is much the loudest, that of the mallard being weak and high-pitched in comparison.

Wigeon rise in silence and seldom utter any cry, as will Duck when chased and wounded. The former are much more systematic in their movements than the latter ; they will leave their feeding-grounds *en masse*, and stop away till they return at night for food. Duck and Teal may be seen at all hours throughout the day in small numbers on the flats ; Wigeon seldom fly aimlessly away when disturbed, or at early flight, but steer for some well-known resting-place, where they are tolerably safe from molestation. They are much affected by weather, such as violent gales ; and without doubt sleep in anticipation of being tossed for days in the coming storm. At such times it seems as if a spell were cast over them ; they are then tame, I may say stupid, beyond belief. A few hours' lull in a three days' gale, is the time of all others to try for Wigeon. The bag of one hundred and thirty-nine, before alluded to, was thus obtained. They are at such times so happy in the sudden cessation of wind and wave, and probably so well aware of its temporary

nature, that for the moment their customary caution is put aside, and food and rest alone thought of.

Such chances are not often afforded the fowler, and when they *do* occur should be made the most of.

Wigeon are not so partial to small lakes as are Duck, and it is rare to take them in decoys, on account of their suspicious nature, unless the pool be not far from the sea.

Wigeon arrive in straggling parties about the 10th October, increasing in numbers till the middle of November, by which date there are as many in most places as will be seen for the winter. They leave between the middle of February and the end of March. A good many may, however, be seen on the inland lakes till April, for all fowl remain later in the spring on the sheltered lakes and meres than on the coast, since they are there less influenced by gales, and appear loth to leave such good harbourage.

In Ireland, Wigeon greatly predominate in the fowler's total. Out of the fifteen hundred wildfowl already alluded to as having been killed by me on the west coast in the winter of 1880-81, twelve hundred were Wigeon.

Capt. Kinsey Dover, who has kindly given me notes of his three best years' shooting out of twenty, with a single-handed punt and small swivel gun, says: "In Mulroy and Sheephaven Bays, in the north-west, in the season, 1860-61, I killed six hundred and seventy-one fowl, of which five hundred and eighteen were Wigeon. In 1861-62, five hundred and ninety-four, of which three hundred and

eighty-six were also Wigeon ; and in 1863-64, six hundred and forty-two wild fowl, the number of Wigeon being four hundred and eight. The number of Duck killed in these three years being fifty-nine, fifty-five, and forty-six respectively ; and Teal forty-one, fifty-five, and seventy ; the remainder being Pochard, Scaup, and Divers. Wild Duck always bear a small proportion."

The migrants when they arrive make for inland waters, marshes and bogs, and they and the home-bred birds require hard frost to bring them to the coast in any number. Such weather may not occur in Ireland once in ten years.

Although, as before stated, I never actually found a Wigeon's nest, or came across a young brood, I have seen hen Wigeon, in no way wounded, hovering about the rushes during summer in quiet corners of inland waters.

Mr. R. Lloyd Patterson, the author of an interesting work on the " Birds and Fishes of Belfast Lough," informs me, on the authority of the Rev. G. Robinson, that the Wigeon is said to nest at Caledon, co. Tyrone, and at Lough Corrib. Mr. Patterson further says he has information from another friend (Mr. Atkinson) that the Wigeon nests at Capt. Molyneux's place, Castle Dillon, co. Armagh, and this latter gentleman confirms what Mr. G. Robinson states as to its breeding at Caledon. I have undoubted evidence from several observant shooters, that Wigeon nest yearly at Portmore Lough, sometimes called Lough Beg, near the great Lough Neagh in the north.

Confirmatory of Wigeon nesting at Caledon, the

owner of the decoy (Lord Caledon) tells me that Wigeon always nested on the pools in small numbers, and that at this date (1881) they occasionally breed there, though not to the extent they did when the decoy was in working order.

THE AMERICAN WIGEON (*A. americana*), though of rare occurrence in the British Islands, has occasionally been procured in Ireland. Thompson, in his "Natural History of Ireland" (Birds, vol. iii. p. 112), notices one that was shot on Strangford

THE AMERICAN WIGEON

Lough in February, 1844, and others in Belfast Bay. The particular respects in which this bird differs from our own familiar Wigeon will be found fully detailed in the third volume of Yarrell's "British Birds;" but to enable a comparison to be made, should any of my readers fall in with it, a figure is here given of it.

THE PINTAIL (*Anas acuta*) is abundant, but local, in parts of Ireland. It is sometimes called the "Sea

Pheasant," or "Spear Wigeon," on account of the elongated tail-feathers of the male bird. Of all Ducks that swim none are of a more graceful shape, or so delicate in flavour. They are, however, somewhat subdued in colour, and the mallard has not the brilliant feathers of other species of wildfowl, such as Duck, Wigeon, Shoveller, and Teal. Though not heavy birds, they are the longest among the Duck, which gives them a most elegant appearance on the water. By the snow-white neck and breast, a male Pintail can be identified at a long distance, and may be at once discerned among other fowl. When in numbers they are wild, as others of their tribe; but if a few only are together they are very tame. Their movements on the wing bear a closer resemblance to those of Divers than do any of the true Ducks. They are fast fliers, but no particular form of flight is adhered to, as with Ducks and Geese. They affect the society of other fowl, especially Wigeon. On rising in company with the latter, Pintails soon out-distance them; but will often drop back to rejoin their companions, and pitch with them.

Pintail do not frequent the north of Ireland, and are rarely met with on the great loughs of Antrim, Londonderry, Down, and Donegal. South of Athlone they are not uncommon. On Castle Gregory Lake, co. Kerry, I have seen them in hundreds. Though rare in Dublin Bay, they are often shot at Malahide, nine miles distant.

On the estuaries of Clare, Connaught, and Kerry they are numerous, and a hundred to three hundred may often be seen together. They do not much fancy the far inland freshwaters, but I have seen

them rather plentiful on Lough Corrib, and on other lakes near the sea.

The Pintail occasionally nests in Ireland; one or two pairs breed every year at Abbeyleix, Queen's County, in Lord Castletown's famous duck preserves, but they are not common (Hon. B. Fitzpatrick). I have seen female Pintails with young broods in June, both on Lough Mask and Lough Corrib, co. Galway. They are more common to the coast lying between Valentia, co. Kerry, and

THE PINTAIL.

the north of Mayo, than to other parts of Ireland. I have also seen Pintails in summer on Lough Inagh, Connemara, but was unable to find the nest or see the young.

Pintails usually make their appearance about the beginning of October or even earlier. They first arrive in sixes and sevens, and increase in numbers until the middle of November, when they are as plentiful as they will be during the winter. These little parties consist mostly of young birds. I have

killed at a shot four to seven of them by themselves, all young and small. They will arrive thus the first week of October. This raises the question, how do these immature wildfowl find their way with unerring certainty over pathless seas? Is it possible they may have been led by the old and experienced to the coast, and then separated to scatter through the adjoining country? It may be so. Very rare visitants, we conclude, lose their way or are driven to our shores by violent gales, but these young birds arrive instinctively. Can it be that the knowledge of where and how to migrate is imparted from one generation to the next by older birds that have made the journey themselves as taught them by *their* parents? Is it that the impulse to migrate is as natural and powerful as the impulse to nest? It is not to my mind so much a question of *why*, but rather *how*, they do this, and find their way. In the far north they have no choice, apparently, but to quit that region when it has become ice-bound, and food and water are no longer procurable. In summer those untrodden wastes afford a natural shelter, without which wildfowl would eventually become extinct. The more civilization extends, the more would the reproduction and very existence of such birds be interfered with and prevented. Severe frosts do not, in my experience, bring more Pintails than might be noticed in mild weather. These ducks year after year frequent their favourite bays and creeks, and will not stray to other spots, though near and equally suitable.

THE SHOVELLER (*Anas clypeata*) is more or less

common to all parts of Ireland, particularly the south. They swim in close bunches of from seven or eight to fifteen—that being the number I have usually seen together, seldom more—and are very easy to approach. In calm water they may be noticed paddling lazily forward as though asleep, their heavy-looking bills rippling along the surface as if in the act of drinking. Perhaps when at rest the head is overbalanced by the unusual weight attached, and it may be an exertion for the bird to keep its bill in a constantly horizontal position. They fly well; not so boldly, perhaps, as other ducks, but not so low as the divers. I have more than once seen these birds suck up the falling rain with their spoon-shaped bills as it for the moment lay on their somewhat cup-shaped backs. I never remarked this habit in other species of duck. Shovellers are poor divers when wounded. The feet are peculiarly small, and give but weak propelling power to the body. The foot of a Shoveller is smaller in proportion to its body than that of any of the true ducks. The larger the foot in the duck tribe the better they can dive. This is most noticeable in the divers; they may be said to have a regular scale of diving capability. None equal the Great Northern, Red-throated and Black-throated species, together with the Grebes, in this respect, and they have the largest feet of all in proportion to the body.

The plumage of an adult male Shoveller is very beautiful, but the ungainly bill spoils the general contour. When put up they fly irregularly, as if they had not all decided on the same direction, but

afterwards point off in company. They rise for a few feet straight off the surface, and so afford an easier shot to the shore-shooter than Duck or Wigeon. The latter will spring away on the course they intend to take (which, needless to say, is from the shooter), putting a greater distance between themselves and danger from the moment they rise.

The Shoveller possesses a curious pendant fringe of horny bristles along the upper mandible, leading from the base of the bill to where the latter overlaps and expands. This, acting like a sieve as the bird feeds, serves to strain the water through, while the soft food collected is retained in the mouth. When feeding the bird swims swiftly along the water, skimming the surface with its broad bill, quickly opening and closing it, and causing a loud rippling noise that may be heard many paces distant. It doubtless sucks in with the water small insects and mollusca, which are retained by means of the fringed mandibles, the fluid flowing out unchecked as the bird careers along in search of a fresh supply.

Though I have seen Shovellers many dozen times in narrow channels, and at the verge of mud-banks, feeding with other fowl, I have very seldom observed them walk up or stand on the land.

I have more than once been told of what are locally termed "Black Shovellers," but have always doubted their existence, unless dark-plumaged females or immature birds were intended. I shot a pair of Shovellers, however, in July, 1878—an old male and female—the former having no sign of white on the breast or wing, but in colour a dull

Or Fowler sculling round a point on the chance of a shot the other side.
N B Next to Sentinel Mallard in right-hand corner, note two Shovellers feeding 444 54

copper-brown, except the head, which was tinged with green. Whether this specimen, which I have preserved, is a variety or not, I cannot say. It may be but the usual change of colour common to the male bird in the nesting season.

Shovellers breed in several parts of Ireland. At Abbeylaxey, in Queen's County, they are common, and breed regularly (Hon. B. Fitzpatrick). In the county Dublin (the only instance in that district), two young Shovellers with the parent bird were

THE SHOVELLER.

shot in the brick ponds at Baldoyle, July 24, 1876, and are preserved in the Dublin Museum. The Shoveller breeds also on Lough Derg (Shannon); Mr. Kinahan shot seven young ones near Portumna; though not common, these birds occur on the south-east and south coast of Ireland and the rivers and lakes adjoining. They are often shot near Wexford, Waterford, Dungarvan, Cork, and Bandon. In the

north and west, though rare, they are occasionally procured.

Throughout Ireland Shovellers may be met with singly or in pairs from August to May, but they do not collect in the small bunches of seven or eight before alluded to till the middle of November. As visitants they are too limited in numbers and dispersed in their occurrence to enable much to be learnt about their migrations. I should say that not a few seen and shot are home-bred birds.

THE GADWAL. (*Anas strepera*) might easily be mistaken at first sight for a female Wild-duck, but the patch of white near the centre of the closed wing affords a good mark of distinction. It is a freshwater-loving fowl, and delights in weeds' and rushes. On the first arrival of Gadwall they may be seen to rest a few days on the estuaries; they then depart for inland waters. I once followed, without success, a bunch of five, an adult male I was anxious to procure, and four others. They took flight after spending a couple of days on the little creek first visited. A week later I found the five birds (presumably the same) established on a small lake some three miles from the sea. I was fortunate in procuring the adult mallard and a female, gladly sparing the others, which I took to be another male and two females. I had great hopes that these might remain to nest, as the thickly-grown reedy mere they had chosen was on private grounds. One of these was shot for a Wild-duck on a moonlight night, and the two others, though afterwards seen, were either of the same sex, or had no intention of nesting, for they

remained till the 20th April, when they left not to return.

Gadwall are far more frequently shot in Ireland than might be supposed.* I have myself noticed six in one winter, on Lough Derg (upper Shannon), and many more might be observed by keeping a careful look-out. I have twice seen them offered for sale with common Wild-duck in a poulterer's shop. As already stated, they appear to make inland, and if found at all are to be seen among the rushes, bogs, and marshes, verging on freshwater lakes

* A female was shot at Cappagh, co. Waterford, Nov. 18th, 1880. Others were killed on the Blackwater by the late Mr. C. Musgrave. One was shot at Bishopstoke, co. Cork, winter 1878-79 (Mr. R. Ussher). More than one in Drumcliffe Bay, some years ago (Capt. K. Dover). Five specimens obtained near Abbeyleix, Queen's County, between 1874-81 (Hon. Bernard Fitzpatrick). One in Kerry, at Balla Lake, Ardfert, 1874 (Mr. Nelligan). Five by me between 1874-79 in various parts of Ireland; one in Ballycotton Bog, co. Cork, Jan. 1881 (Mr. J. Hare), and a specimen was sent from Blacksod Bay, co. Mayo, to Mr. Rohu, Dec. 1880. Mr. Williams, of Dublin, says: "I have set up two Gadwall for Mr. Fitzpatrick of Abbeyleix. I purchased two in the market last winter (1880-81), and I saw five other specimens in the poulterers' shops, ranging from a very young bird to a mature male." Mr. Robert Warren, of Ballina, writes me word that in 1879-80 he shot a male and female Gadwall out of a little party of seven or eight, that were feeding near his house on the Moy estuary. He adds, he noticed their peculiar appearance on the water, and carriage of head and bill, together with the black patch (really dark green), near the tail; and at once seeing they were strangers, fired and obtained a couple. The same winter he bought three fine specimens at a dealer's in Ballina, and presented them to the Kildare Street Museum, Dublin. Mr. Beecher, of Beechwood, Dalkey, tells me he obtained three Gadwall, January 1881, in the Dublin market; and that he heard of two or three others offered for sale, and shot in the vicinity. Mr. J. Payne, Bandon, came across a bunch of six Gadwall on the Ballinacurra River, near Upton, co. Cork, in January 1881. He fired and dropped one, which he described to me as looking quite black as it lay in the snow.

and pools. They are extremely shy fowl, and never haunt open waters or bare mud flats. They prefer, rather, lonely pools and rush-grown lakes to bleak unsheltered spots, and differ from Wigeon in this respect. The birds before referred to had to be gently driven from a maze of aquatic herbage. They would silently paddle to the verge of the clear space in the centre of the mere, then turn back and thread their way in and out among the reeds and water-

THE GADWALL.

plants. If too much noise was made in doing this, they would rise singly and cross to a distant corner, there remaining hidden from view. They were never seen by day to swim in the open space with the Duck and Teal.

A Gadwall is larger than any Wigeon, to which species it has been compared in size and weight by modern writers on ornithology.

The male Gadwall is a fine plump-looking bird, with a very broad chest, in weight equalling, and sometimes excelling, the female Wild-duck. His

whole aspect is somewhat that of a dark-plumaged and rather small farm-yard Duck. Though it resembles one at a distance, a nearer inspection will discover the beautiful marking on the breast that is peculiar to the Gadwall.

This dappled appearance is formed by small white half-moon-shaped pencillings on each feather, about an eighth of an inch from the tip. From the general colour, the name "Grey Duck" is not inappropriate. I never heard a Gadwall call. From the stealthy, reserved habits and night-roaming disposition of the bird, I should doubt its often doing so.

Sir W. Jardine notes that Gadwall dive for their food, but the shape and habits of the bird render this highly improbable; I never saw or heard of one doing so, except, as all the tribe will do, when winged.

THE TEAL (*Querquedula crecca*), the smallest and prettiest of all wildfowl, and delicious eating, is at most times easy of approach, especially when resting on a bank; but the instant they stretch their necks, prepare to fire; they give less warning and bounce up quicker than any other fowl. The outsiders seldom rise and pitch again with the main body when you are nearing them, as is often the case with Wigeon. They will spring up in a moment and all together, and thus when numerous afford a good flying shot. Teal are daintily formed, and their bones are so small and light that a comparatively slight wound disables them. It is surprising, when snipe-shooting, the distance a Teal can be killed with number 8 shot, even up to

fifty yards. For this reason they may be fired at when at a greater distance than is customary with other and stronger fowl. They are not very expert divers when wounded. Their habit then is to swim near the surface, with but head and bill showing: a very small mark to aim at in rough water. After putting up Teal out of shot, or by firing, keep them well in view; when least expected they will wheel and pitch, thus giving a second chance.

Teal appear in the harbours and estuaries of Ireland in great plenty about the end of October or first week in November. In a short time they disperse; the majority make for inland waters, which they fancy most, and where they freely breed.

In June, 1878, I watched from behind a bank, unseen myself, a Teal with her young brood of fourteen little dots, mere specks on the water. This was an unusual number, as I have not as a rule found a clutch to exceed eight or nine. It is, however, most difficult to count them, unless they follow the parent in deep water. When the water is shallow, or weeds and rushes abound, they are up and down, here, there, and everywhere, in a few seconds. Lough Erne, where at the time referred to I was trout-fishing, should be, with its numerous grassy islands, a capital refuge for fowl that remain to nest, as there are said to be as many islets in this lake as days in the year.

The tameness of the wildest birds when guarding their young is well exemplified in the following occurrence, described to me when in Achill, and personally witnessed by Mr. Salt (Lord Cavan's agent), August 1st, 1881 :—"Last week a farm-boy

near here fell in with a brood of young Teal. He drove them before him to Lord Cavan's Lodge. The mother Teal would not forsake her young, but followed after, keeping close at hand all the time. The boy drove them into the yard and into a little shed. The old bird, following all the time, ran in after them, and though there were dogs and people about, she was not the least afraid."

On the first arrival of Teal I have seen from two to five hundred together ; they are found throughout the winter in more or less plenty on the coast ; but unless the lakes are frozen, they do not again visit the tide in large numbers ; should such a frost continue, they travel south, and vanish.

For beauty of feather no bird can excel an adult male Teal ; the dappled breast, the exquisite contrast of velvet black, metallic green, and rich cream yellow ; with the graceful, sprightly aspect, are unrivalled. A curious variety of the Teal, of a rich cream colour, is preserved at Longueville, co. Cork, where it was taken in the decoy. A number of Teal, collecting at night, or in a happy humour by day, chatter and whistle loudly. They sometimes then sound like a stand of Golden Plover. The mallards whistle low and shrill, although not nearly so distinctly as the cock Wigeon ; the female's call is a subdued imitation of the Wild-duck. Teal leave about the 20th March.

THE GARGANEY (*Querquedula circia*), though not very uncommon in England, especially in some of the eastern counties, where it breeds, is perhaps the rarest of all the well-known Ducks in Ireland. If, however, it were sought for at the proper time, it

might be more frequently obtained ; but that time being the Spring, penalties might be incurred, from which the specimen-hunter would not be exempted. I have, in many years' fowling, seen but four of these elegant little fowl, on two occasions in the month of March. They are most graceful-looking birds, though of sober plumage ; in size between a Teal and hen Wigeon, but nearer to the former. There are Irish specimens of the Garganey in the

THE GARGANEY

Trinity College and Leinster House Museums, Dublin. Mr. Sheridan obtained a couple at Achill, and remarked their great swiftness on the wing. Mr. Glennon saw two Garganeys exhibited for sale in Dublin market, shot in the Bay, in the winter 1880-81, but the price asked for them by the dealer was too high. One shot near Youghal came into the possession of Mr. R. Ussher, of Cappagh, who presented it to the Dublin Museum. Three were shot by me on March 20th, 1878, in Cork Harbour, and a fourth seen in March, 1880, in the

same place. Those I shot were paddling quietly along in open water near Rostellan Bay, an adult male and two females. They were very tame, and allowed me to kill two of them on the water, and a third flying, from an ordinary boat, with a shoulder-gun. I should have passed them by as Teal had I not remarked the white streaked neck of the male bird.

I might have spared them had I thought they would nest in the locality safely, or that others armed with guns would have been equally considerate. But to a specimen-hunter such a chance was irresistible, and not likely to occur again. They would, probably, have been sold and eaten if killed by another fowler, and though lost to view, be ever regretted in my memory. It is, indeed, hard to know how to treat honourably a *rara avis* in Ireland; if you do not secure it, the chances are some one else will. A Hoopoe not long since paid my garden a visit in April. How I treasured it! But what was my delight when a second took up its quarters with the first. I guarded them night and day, and hoped they would nest. Alas! I soon missed one, and was in despair. My search was unavailing. Passing through a small coast village a few days after, and near where I was then living, I found a poor fowler exhibiting for a "penny a peep" what he called a "Foreigner," in reality a Hoopoe, and of a surety *my* lost bird!

THE SHELDRAKE (*Tadorna vulpanser*) presents a purely black and white appearance until almost within shot: the chestnut markings may then be discerned. These birds vary considerably in size,

and, though apparently adult, often lack the knob at the base of the bill. Their flight is slow and measured, somewhat resembling that of geese and swans. They are the wildest of fowl in open weather, the tamest in frost. On a sandbank, their favourite resort, they at times offer a tempting shot, but are worthless when obtained, except to unscrupulous dealers, who dispose of them as wild-duck to the ignorant. They breed in rabbit-holes in many parts of Ireland, sometimes at a depth of from ten to twelve feet from the entrance of the burrow.

Various suggestions have been made as to the origin of the name Sheldrake.

First Gunner : " Because they feed on shells, or from their tortoiseshell plumage."

Second Gunner : " Because they have a lump at the base of the bill like a shell."*

Learned Professor : " It is most probable that the name is derived from *sheld*, signifying pied or parti-coloured, and therefore most appropriately bestowed."

The call of the Sheldrake is a low subdued pipe, and does not in the least resemble that of a duck, as might be expected from its size and shape.

I once saw an amusing tugging match between a female Shelduck and a young rabbit that had invaded the hole which she had selected for her eggs, the intruder at last being hauled out by the ear and sent adrift.

I never saw Shelducks inland, and seldom *heard*

* This lump turns a pale pink during the breeding season, and then bears a fanciful resemblance to a shell.

of their being found away from the coast, but Mr. Webber assures me that they sometimes visit his decoy-ponds at Athy, co. Kildare. They nest chiefly in the north, east, and south-east of Ireland, and Mr. Ussher says he has dug out their nests fully ten feet deep in the sand-hills of Dungarvan Bay. At Ballybunion, in the north of Kerry, I have now and then found a nest, and once saw at that place a Shelduck rise out of the ground; first the head and neck and then the body, almost under my feet, the sand having drifted over the entrance to her burrow! Shelducks nest near Malahide, co. Dublin, and all along the shores of Wexford, Waterford, Wicklow, Louth, Down, and Antrim. They also breed in the Moy estuary, Ballina, co. Mayo; in Sheephaven Bay, co. Donegal; and about the estuaries of Kerry.

Roslare Point, the protecting sand-bar of Wexford Harbour, is, among others, a favourite spot for these birds. The fowlers who live there capture the young or take the eggs to keep or sell every year. The nest of a Sheldrake is not easy to find (fortunately), but after rain the footprints of the old bird may be seen outside the burrow. I have, indeed, noticed them fly in with a dash, the wings folded at that instant, rather than alight at the entrance and leave a trace behind for plunderers.

On different parts of the east coast of Ireland, where these birds breed, the local fishermen and shooters who know their haunts rob the nests, and sell the eggs to be hatched out under hens. They also catch and dispose of the young to owners of private lakes and ornamental waters. No wild-

fowl are more easily domesticated or are prettier pets, whether old birds taken alive or a brood from the sand-hills.

I have known Shelduck to nest on precipitous islands and rocks, in natural holes and crevices. They do not invariably choose sand-hills, or always lay their eggs in rabbit burrows. When a young brood is hatched out in places where the old bird cannot lead them down to the water by reason of cliffs or steep banks, she will carry them. I have seen from ten to twelve of the young ducklings climb up on the mother's back, each little one holding a feather in its tiny bill, and thus carried by the parent to the safety of the sea.

A much rarer species, seldom met with in a wild state in the British Islands, is the RUDDY SHELDRAKE (*Tadorna rutila*). One in Mr. Nelligan's collection at Tralee, shown me by that gentleman, is a young male, and was shot at Tralee, August 17th, 1869. The only other specimens obtained in Ireland, so far as I know, were shot, one in county Wicklow in 1847, and now in the Natural History Museum, Kildare Street, Dublin, and another, in the same collection, obtained more recently from county Waterford. A fourth Irish specimen of the Ruddy Sheldrake is preserved in the museum at Trinity College.

It is most probable that all these may have escaped from some private waters where "ornamental waterfowl" are kept.

CHAPTER IV.

Decoys—Their Construction and Management—Decoys in Ireland—
 Enemies in a Decoy—Foxes—Pike—Heron—Decoy Ducks—
 Mode of Capture—Formation of Pipe—Use of Dog, and Ferret
 —Hints for Decoyman—Decoy in Operation.

THERE are, to my knowledge, but three Irish Decoys in working order at the present day, namely, Mr. Longfield's, at Longueville, near Mallow, co. Cork; Lord Desart's, at Desart House, co. Kilkenny; and Mr. Webber's, at Athy, co. Kildare. Through the courtesy of the owners, I am enabled to give a few particulars concerning them. Why more decoys are not made and worked in Ireland I do not understand; as a lucrative amusement, and in a country so admirably adapted by nature, with its abundance of wild waterfowl, they could not fail to succeed. There are many private and necessarily undisturbed meres and pools near vast estuaries and inland lakes (the latter crowded with Duck and Teal) that, with the requisite knowledge, might easily be converted, with little trouble, into successful decoys. Again, Ireland is so rarely visited by frost that the fowl would seldom be forced to seek the estuaries on account of ice in the decoy pools.

Longueville.—This decoy is not worked with a

dog ; but by feeding the birds up the pipes (of which there are only two), together with a few tame ducks. The average take is about three hundred fowl in the season.

Desart.—Lord Desart says that his decoy of late years has been very nearly a failure. The ducks come as usual in large numbers during November, but for some unknown reason the decoyman takes but few compared to what he used to do. The foxes are here great enemies to the tame decoy ducks, and often manage to destroy them.

Athy.—Mr. Webber's decoy was constructed some forty years ago. It was not worked regularly till 1873, when it was much improved by the formation of new pipes, and improved protection for the fowl. Since then there has been a fair take every season, varying from 1,000 to 3,000 birds. The water covers about twelve acres, and is frequented in winter by immense flights of Duck, Wigeon, and Teal, which there find all the natural advantages which suit them. The decoy is worked with a dog and a few tamed birds, and it has (the owner says) proved a most interesting as well as a profitable pursuit.

There was formerly a decoy at Caledon, but it is not now worked, nor has it been in order for some time past. It was dismantled by Lord Caledon after being in disuse for several years. The eight pipes are now overgrown with tall trees, which are occupied as a heronry. Being some distance from the sea, the "lead" of wildfowl was rather uncertain, but, when in use, from two to four hundred fowl were sometimes taken in a week, and as

many as two hundred at a time. The same may be said of the decoy at Eyre Court, co. Galway ; at Mr. Evatt's, co. Monaghan ; at Mountains Town, co. Meath ; at Lismullen, in the same county ; and at Ballynakill, co. Kildare. The two latter have not been used for a number of years.

Foxes are great enemies to decoy fowl, and are often the cause of their destruction. Nothing comes amiss to these marauders ; for, as the Duke of Wellington said of his troops, they will go anywhere and do anything. A fox, curious to say, is very fond of shell-fish. I have twice found one lurking on a bare rock in an estuary a couple of hundred or more yards from shore, from whence it must have swam. I well remember a fox being found, several years since, by a boating party, on the " Tuscar Rock," near Swansea, in the Bristol Channel, a spot covered at high tide, and a full mile from land at low water.

Another great enemy to the peace of a decoy pool is the Pike. I have seen young ducklings snapped up many times by pike ; one swirling plunge, and they were gone for ever. These fish in the Shannon chain of lakes attain a great size, but from the immense extent of water are hard to catch, or rather to find. Marvellous stories are there current of their weight and voracity, most of which are absurd, yet I have no doubt that pike of sixty pounds weight have been, and are still, to be caught in Ireland. A few years since, to win a wager, I passed an autumn fishing for pike, taking with me several dozen cork floats, besides every conceivable bait and tackle, and a boat on wheels,

to the lakes of three counties. I caught 380 of these fish, but none over twenty pounds, and few near it. The two heaviest pike I ever saw, and which were carefully weighed in my presence, turned the scale at thirty-eight pounds two ounces, and forty pounds, respectively. The first is now in my possession, and was taken near Scariff, co. Clare, in Lough Derg, 1877; the second is the property of Colonel Gason, of Kildeelagh, co. Tipperary, near which place the fish was caught, also in Lough Derg, and in the same year as the other. Both were preserved by Glennon, of Dublin. There was for many years a very large pike in a fishing-tackle shop-window on the Dublin Quays, said to weigh forty pounds, but I cannot vouch for its weight being correct, as I can with regard to those first named. The truth-loving scales are a trying ordeal for these big fish to undergo. There is no doubt that pike play dreadful havoc with the broods when small, as the latter cruise about the rushes, where these fish are so fond of basking in summer. Such giants as those above described would attack full-grown Teal, I have no doubt; and what could be a more tempting morsel to a large pike, a fish that is always ready to rush at a moving object with tiger-like ferocity, if at all to its fancy?

A pike was brought to me a few years since with an immature female Tufted Duck stuck in its mouth, and which, not being able to eject on seizing, had choked it. This fish weighed eighteen pounds, but had it been in condition would have been nearer thirty. A friend described to me how last summer he was fishing for perch in his private lake,

when one of his tame swans dashed along the water for several yards, ere it could shake off a pike of some ten pounds which had closed on the bird's foot. The narrator said that the fish "held on," the truth being it could not leave go so soon as wished. By reason of its incurved teeth it would be hard to disengage anything that fitted tight in a pike's mouth. As many shooters are also fishermen, I may, perhaps, be pardoned for this digression from feathers to scales.

Pike in decoys disturb the peace of mind of the ducks, and should be got rid of. Set lines should be arranged and baited in the evening, when the fowl have left for the night, and be taken up and reset at the same hour the following day. Anything unusual startles the denizens of a decoy, and makes them suspicious for some time. The Heron is well nigh as bad as fox, pike, or otter, he is so visible. His stealthy tread, as if on guilty deed intent, his heavily flapping wings, ungainly form, and, worst of all, his hoarse cry, are most objectionable to wild-fowl in a confined space. His very shadow will alarm them—a spectre in itself. He must assuredly be trapped or poisoned. All noise must be avoided near a decoy; and this halo of quiet should, if possible, extend half a mile on every side. A perfect decoy cannot be too lonely or retired from sights and sounds of every kind. It should be small rather than large; two acres is plenty of water: the birds are then much more manageable, and likely to follow dog or tame birds. There are scores of places in Ireland where decoys could be made, not only as a source of amusement, but of profit as well.

Any small rushy pool in a retired situation, with a stream through it, and trees and brushwood around, will answer the purpose. Some spot in the vicinity of a large estuary or inland lake is, of course, best. Ducks cannot abound where they do not find food. After feeding at night, and you have established a haunt (your first care, ere you think of capture), the fowl will fly many miles to rest in your convenient shelter and enjoy it; basking and pluming in peace and happiness all day, instead of being constantly on the look-out for danger.

The birds will, when they get to know it, in preference pass the day with you in peace and quietude, rather than go to unprotected waters where they are likely to be disturbed and shot at. There is no more interesting sight than to view half the wild-fowl of the county collected in your private demesne, did you never take one of them, the very birds that are being followed, shot at, and sighed for, outside the bounds. Here you see them peaceful and happy, washing, dressing, and sporting in comparative tameness.

Though. Duck and Teal are taken by thousands in a few well adapted decoys in England, no one need grumble who can manipulate his three to four hundred in the season.

I will now attempt to describe the construction and mode of working a decoy for capturing wild-fowl, such as might be completed at a trifling expense in any suitable locality, either in England or Ireland. I do not say it would be a source of profit, save under most favourable conditions; but its management would give those who have a taste

for the subject, instruction and pleasure all the year round, to say nothing of the substantial additions a decoy would bring to the table of its owner, if properly worked.

Now, although a decoy should be as sequestered and free from disturbance as possible, especially when large takes of fowl are looked for, it by no means follows that this is imperative in a moderate venture of the kind. As I write, I can call to mind a decoy in full working order, within less than one hundred yards of a much used high-road; so near, indeed, that idle folks pitch stones into the very sanctity of the pool itself, and the carters, as they ride slowly past, crack their whips to startle the fowl they can plainly see over the park wall. But wildfowl soon discover real danger, and in a case like that referred to, the crack of a whip, or a falling stone, is in a short time disregarded. Keepers or labourers loitering about the banks of the pool, with or without dogs and guns, must, nevertheless, be at all times strictly forbidden, and nothing in human form should be allowed near the water's edge.

Cattle, though the fowl take no notice of them, must not be collected by the herd or his dog within sight or sound of the decoy. Low trees, undergrowth, alder, willow, rushes and evergreens, should environ the pool and pipes, both near and at a distance, but the planting must be done judiciously, and not so as to give the aspect of a walled enclosure, in which fowl would hesitate to alight, fearing a snare. Low shrubs may be placed so as to shelter the fowl from vulgar gaze, and prevent their seeing horses and foot-passengers on a neighbouring road.

Though, as before said, this need not be *always* rigorously carried out, it is far *better* to do so when possible, for a decoy, by rights, should be in the centre of a district, the peaceful solitude of which may extend *at least* a quarter of a mile on all sides.

Ducks often fly from eight to twelve or fourteen miles to feed at night, particularly if such a flight will bring them to a tidal estuary. Naturally much larger takes of fowl may be expected when a decoy is within a few miles, perhaps six or eight, of the sea ; the fowl then arrive from distant lands unsuspecting and anxious for rest ; yet good results may be obtained at any spot inland, where their tribe is fairly numerous.

With a little management a decoy can be made to attract by its quiet security the great majority of all fowl for many miles in its vicinity.

The birds are only too ready to pass their days in a snug retreat, where (apparently) their persecutor man does not exist, where dogs and guns are never heard, and where they can sleep and rest in peace, without being for ever on the watch for danger.

Some decoy owners tempt their ducks to feed in the immediate neighbourhood of the pool by encouraging the growth of pond weed and short sweet grass. This is an error. The fowl do not visit a decoy with the intention of feeding, but to rest and plume, or to bask and float to and fro as they fancy. If the birds find food near at hand about the margin of the pool they will not leave it at night, as they ought to do ; for by flying to a distance they associate with many hundreds, perhaps thousands, of their kind, and so allure a con-

siderable number of their companions back with them to the decoy in the morning. When a decoy gets stale—that is, when there are no new comers, but the same birds day after day, though in great abundance, they are hard to take, and fail to be attracted as wished. This state of affairs is more likely to happen at an inland decoy than at one near the coast. At such a pool feeding the birds up the pipes will sometimes be found more successful than the use of a dog, however clever he may be at his trade. The old *habitues*, that have frequented the water daily for weeks, soon learn to regard the antics of a dog with indifference, and show him the contempt they no doubt think he deserves. A batch of freshly-arrived Duck or Teal, on the other hand, will often follow him at once, the latter at times quite foolish in their hurry to see the strange animal that dodges round the screens. Teal are by far the easiest of all fowl to delude ; Diving Ducks (such as Pochards, Goldeneyes, and Tufted Ducks) the most difficult ; these latter being seldom or never taken, however numerous they may be. Their presence on the pool is a trouble to the decoyman, for their restless, uneasy movements disturb the serenity of Ducks and Teal. Wigeon are also very shy, though far less so than are the Divers. The proportion of Wigeon taken in decoys is very small compared to the multitude of Duck and Teal captured. But Wigeon should always be welcome to the use of a decoy pool, for their clear, loud whistle seldom fails to attract fowl of a more valuable kind that happen to be flying overhead *en route* for other resorts.

As to decoy ducks, any kind of dark, tame species answers well; a score is sufficient; and their motions will keep a considerable extent of water from freezing should a frost set in.

To obtain other decoy ducks that will fly about the vicinity of a decoy, and, if not shot (a too probable fate), be useful in leading wild birds to their home, the pool, the following plan should be adopted. Confine a pinioned wild mallard and some farmyard brown ducks together, and when a brood is hatched turn all down on the decoy pond. The offspring, though showing wild blood and tendencies, will yet have enough affection for their nursery to make the water their home and place of refuge, however far they may stray, and here they should be fed. A few Teal, pinioned and tamed, make admirable assistant decoys, as their wild relations will now and then follow them up the pipe, when all other modes of enticement fail.

The decoyman's dog should be as like a fox in coat and colour as possible, though in size at least a third smaller, with a bushy tail and a frolicsome and affectionate disposition. He should be clever and obedient, and, above all, quick in doing as he is ordered, instantly, and in perfect silence.

Why ducks pursue a dog can only be conjectured; it may be partly from curiosity and a little from aversion, but I believe chiefly from the idea that as they follow him from screen to screen they are succeeding in chasing him from their presence; their supposition being that it is their natural enemy, a fox, they are *for once* getting the better of and driving away. As sheep or cattle

follow a dog and stamp their feet in bravado when he turns *from* them, so will Ducks swim up a decoy pipe with stretched necks and defiant inquisitive gaze, so long as the little deceiver appears in front as if gradually retreating. Should the dog face the birds abruptly, quite close, or show behind them, they will swim quickly back to the mouth of the pipe in alarm.

A decoy pool, if wildfowl frequent the neighbourhood, may be made out of a pond of no larger area than 60 to 70 yards square, 4 to 5 feet deep, and shelving from the centre to the sides, and with but three or even two pipes, one pointing towards the north-east, as from that quarter most fowl arrive, and another towards the prevalent wind, which in these latitudes is oftenest south-west. Duck are invariably taken in the pipe the wind happens to blow *out of*, and never in a pipe into which the wind blows *from* the pond. Though the wind need not blow exactly down a pipe, and fowl may be taken if it is to one side and against the screens, yet it is useless to try to decoy them up a pipe unless the breeze and ripple are towards them as they swim under the entrance. Whatever number of pipes there may be on a decoy pond, they must all curve the same way, and this is usually from left to right.

In a small decoy, such as I am endeavouring to describe, several hundred fowl may be taken in a season. The most successful one of its kind I ever saw consisted of less than an acre of artificial water, and lay 200 paces distant from a mere of six or seven acres. On this mere were six pipes

skilfully arranged and well managed in every way. Though the surface of the water was often crowded with fowl, it proved too large, since the birds for days at a stretch would keep in its centre, out of reach of the decoyman's attractions. The small pond with two pipes was then formed, and in the second winter of its existence accounted for more fowl than the old decoy had yielded in three good seasons.

The birds soon took, especially in rough weather, to frequenting the smaller and more sequestered pool, and in frost it could be easier kept open for them. They evidently fancied it as a "sanctum," and if not there when wanted, a water-dog sent into the larger mere for a stick by a man concealed in the bushes, would at once have the desired effect of driving them to it. Once on its tranquil surface, for it was well protected from the wind, save at the openings in the growth of bushes above the pipes cut for the breeze to come through, they seemed to consider themselves doubly safe, and good "takes" resulted, sometimes within a couple of hours of their arrival from the larger piece of water.

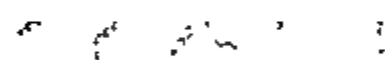
In its first year good results must not be expected from a decoy, for it takes some time ere the fowl discover that a haven of rest exists, where there was previously nothing of the sort. Should a number of ducks visit a newly-made pool, though they might be easily taken, it is wiser at first to leave them to fly away and impart the tidings of a safe shelter to their many associates at a distance. The second year it may be worked, but not vigorously; the third season it should be in full employ.

The secrecy and science decoymen affect is very foolish, and is commonly practised lest a curious visitor should discover what a very simple feat taking fowl in a decoy really is, when divested of the mystery with which its management is purposely shrouded.

There are three methods by which Ducks are tempted far enough up a decoy pipe in order to cut off their retreat, and achieve a capture. First, by strewing food up the pipe and near its entrance, such as bruised oats or other floating grain. Secondly, by feeding the decoy ducks up the pipe; these the wild birds will often follow to get their share of the food they see the tame ones devouring. Thirdly, by the use of a dog. When, for example, the wild birds hesitate to follow the tame ducks up the pipe to join them in seeking the grain thrown into it by the fowler from behind the screens, then the dog suddenly leaps into view, and the next instant vanishes, and they are thus enticed by his strange and sudden appearance far enough up the pipe for their retreat to be intercepted by the fowler.

The mode of securing fowl is always the same, and consists in alluring them by one of these devices to such a distance up the pipe, that the decoyman can run swiftly past them behind his shelters and, unperceived by the fowl, reach the entrance.* The entrapped birds, rather than fly

* Every screen, except the long back ones, has a peep-hole, that the fowler may see all that is going on in the ditch and pool. A little pipe of tin should be stuck in the reeds of the shelters to look through, at a convenient height, and may be six inches long and a half inch in diameter, and a little wider at the mouth than where it is placed to the eye.



BIRD'S-EYE VIEW OF DECOY

back *past* the fowler to the pond, will start off in confusion and fright, the other way, flying and fluttering up the narrow end of the pipe, the bend of which, as they hasten onwards, deludes them into fancying there is a free passage for escape further on. Once round the curve, they find they are in a rapidly contracting pipe, from which there is no outlet, and at the extreme end of which they are taken, still trying in vain to urge their way forward to escape from the fowler moving up behind them. When the decoyman at the mouth of the pipe finds

the fowl are well inside, and dare not pass him to escape by its entrance, he need but wave his hat and walk along between the screens and the net. This is quite sufficient; for directly the birds see him they rush forward pell-mell, till finally they are taken in a helpless crowd in the movable tail-end of the pipe. *Absolute silence* is necessary during these manœuvres, for did the decoyman make any noise, he would alarm the other birds on the pool that might be afterwards netted. A decoyman must, on all occasions, be sure that the fowl he has manœuvred up the pipe are sufficiently far from the mouth of it to give him time to run back and show himself at the entrance to intercept their retreat and drive them up it. For they will often start and swim quickly back to the pool, when he hastens from the screen through which he has been looking, or when his dog no longer shows.

Should the fowl escape, an alarm is given and future capture for some time prevented. In some decoys an assistant lurks near the entrance of the pipe that is being worked, and on a signal from the decoyman that the birds are far enough up, starts into view.

The surroundings of a decoy-pipe should be, to all appearance, as rustic and unartificial as possible. The lighter, more open, and uncovered the pipe looks, with less suspicion will the fowl regard it, and the more ready will they be to enter its fatal precincts. The screens should be of framework, somewhat similar to hurdles, with dried reeds closely woven uprightly in and out of the bars, so that the most peering eye cannot discern the move-

ment of man or dog through them. The long back screens may be made in a similar manner and of the same height as the shorter ones in front of them. The space between the short screens where they overlap (some three feet in width), should be filled up near the ground by small wooden hurdles or leaps, two feet high, and with rushes fixed in and out of their bars ; in fact, small shelters.

Over each little leap bounds the decoyman's dog, then, frisking round the front of the screen just before the fowl, pops back out of sight to his master over the next leap ; the decoyman moving on from screen to screen till he has enticed the birds far enough up the pipe to suit his purpose. It is this sudden appearance of the animal, as he skips into view, and again out of sight, that so fascinates and attracts the fowl that they follow him.

The screens should be placed as shown in the plan of decoy pipe, with their upper edges just below the height of an ordinary man without his hat, about $5\frac{1}{2}$ feet, and in length 12 feet. The lower they are, the less like a walled enclosure they will make the pipe seem, and the less it will be avoided by the fowl. They should be 4 feet from the ditch. The covering of the pipe should be of net ; wire shows too hard and black against the sky. At the pipe's mouth the meshes can be $4\frac{1}{2}$ inches square, a dozen yards up its length $3\frac{1}{2}$, at the bend $2\frac{1}{2}$, and at the tail an inch only.

The pipe should be 25 or even 30 feet wide at its entrance, and 12 feet high to the top of the arch.

The height may be one-third less by the time the bend is reached, and from thence it gradually

PLAN OF DECOY-PIPE.

decreases to the end, where the fixed part terminates in a width and height of two feet. Here a detachable tunnel-net is hooked securely to it, and continues its shape ; it is kept open by light ash hoops ; it may be nine feet long, and taper to a point ending in a loop that hooks over a peg in the

ground to keep it extended, and it then finishes off like a tail the whole pipe.

When the scared fowl have forced their way into this tunnel-net, or tailpiece, the fowler unhooks it at the spot where it joins the fixed pipe, holds it together near its open end between his knees, or draws a running noose round it behind the struggling birds, then takes out his captives one by one. This end of the pipe, in fact all the way from the curve, must be well concealed from the decoy pool. It should twist into shrubs and underwood, so that the terrified captives cannot possibly be viewed, or their cries too plainly heard by the denizens of the pool. The tunnel-net must for this reason be dragged some little distance ere the work of strangulation commences.

The longer and larger a decoy-pipe is, in reason, the more open and unsuspecting will it appear; but 60 to 70 yards, measured outside the curve, will be found amply sufficient.

A nicely-planned pipe looks to fowl paddling up it as though they could swim or fly right through and pass out at the end, and in case of alarm they at once endeavour to do so, rather than face a palpable danger in their rear—the fowler at the entrance.

The ends of the hoops over which the net is stretched drop into sunken posts, with deep holes bored to receive them on either bank of the ditch. These hoops should be of galvanized iron, and as far from one another as will suffice to stretch the net; if close, they look heavy when viewed collectively; if too far apart, they will not sufficiently extend the

net. The foot of each hoop on the opposite side of the ditch from the screens may be placed as close to the water's edge as the posts can be firmly fixed. On the side next the screens they may be 18 inches or 2 feet from the bank. The net on the edge of the ditch furthest from the screens must touch the ground, and be secured from lifting by means of strong split or notched pegs. On the screen side of the ditch the net must not reach the ground; the space left open allows the fowl, as they swim up the ditch, to view the attractive antics of the dog plainer than if they saw him through the meshes. The distance between the lower edge of the net and the ground on this side of the pipe may begin at $2\frac{1}{2}$ feet at its mouth, a few yards further 2 feet, then a foot, and when opposite the last screen but two, the net may be gradually lowered till it reaches the ground, as it does on the opposite side all the way along. When swimming or flying up the pipe, fowl never attempt to escape by this opening, but hustle to the opposite bank, where the net touches the ground.

The ditch thus arched over may be 18 inches in depth, but were it much deeper ducks rarely dive, however much alarmed, unless wounded. The ditch and pipe, of course, narrow together from the entrance to the tail-end. The ditch is cut to where the fixed portion of the pipe terminates, the tunnel-net being on dry land.

The round smooth banks that skirt the entrance of each pipe to right and left are to tempt the fowl to remain conveniently near to their respective mouths for the purposes of decoying. On these

banks the fowl love to waddle up and bask if the day be bright. I have seen small islands arranged here as some protection for the tame decoys from foxes, and with tolerable success; but sooner or later these cunning marauders make a meal off some of the tame birds, sometimes finishing them off one by one in succession. A decoyman, to my knowledge, one fine morning when peeping through his screens actually saw Reynard driving some of his decoy birds up the pipe, that he might seize them at its narrow end. The man was so astounded at the sight, that he gave vent to an exclamation of surprise. The startled robber at once cantered back along the brink of the ditch inside the pipe to its entrance, and made off.

The tame decoy ducks must always be fed at the entrances of and inside the pipes; a very slight whistle from behind the screens will bring them up if well trained. The low imitation of the Wigeon's "whe-oh, whe-oh," is the best call to use. They will even come hurrying across the pool on seeing the dog pop out from behind a screen if they are too far to hear the usual signal; they are well aware his presence is always accompanied by food, and this they look for in the pipe. Their regular hour for receiving food must be in the twilight, after the wild birds have left on flight. They will then be fairly hungry, and ready to do their work next day. They must not be kept *too* hungry, or on hearing the decoyman's whistle they will flap noisily across the pool, too fast for the wild birds to follow them, besides creating suspicion. If too well fed, they will not come at all! They should

swim steadily and naturally to the pipe at all times.

A ferret will now and again attract fowl when they are no longer interested in the evolutions of a dog. To work a ferret for this purpose a string must be put round each screen beforehand, and the ends joined, so that the cord forms a continuous band which can be pulled as wished to and fro round the screen. A loop is made in the cord, and this is secured by a spring-hook to the ferret's collar ; he is then dragged in front of the fowl, from the opening of one screen to another. If the birds follow, he can be at once detached, and hooked on to the cord already encircling the next screen, and so on. Not a pleasant life, though a useful and energetic one !

A decoy pool requires a stream of water or reservoir somewhere at hand, from which a flow can be led into the pipes by drains. An outlet in the pool must be regulated to keep the water from rising too high in the pipe ditches. A slight current into the pipes is sufficient, so long as it drifts the scattered grain down the ditch, and a little beyond the pipe's entrance. These drains may run in near the bend of each pipe, and small sluices can be fixed to turn them on and off. All fowl swim more readily against even a slight stream than they ever do in still water. The pipe that suits the wind, and is about to be used, can have the water flow turned on previously ; the other pipes as occasion requires. A little trap-door may be made in each drain behind the screens near where the water empties into the ditches, about 30 yards from the pool. In this opening the food can be dropped

so that it floats nicely down the pipe. If the pipe ditches get too shallow, the water can be turned on at each pipe till there is depth sufficient for the purpose. A moderate breeze that rustles the herbage and reeds is an assistance to drown any chance noise when working fowl.

The decoyman must be able to approach any part of his screens and pipes under cover, and without fear of being detected by the fowl on the pool. This a little careful planting will ensure. He can then peep through his shelters at the pipe's mouth to reconnoitre in safety. If he sees the fowl grouped in the centre of the pool, they are, probably, suspicious, or restless, or just arrived, and an attempt at their capture should be deferred. If, on the other hand, they are spread about the entrance of the pipe that the wind permits being worked, he may venture a try. Should they be basking and sleeping on the smooth sloping banks on each side of the pipe's mouth, he sends his dog in front of them by running him round, or through an aperture in one of the long screens that happens to fence the spot they are resting near. The fowl hurry into the water in affright, and then turn about as though conscious of security when in their natural element, and safety lending courage, face the intruder with an aspect of anger and curiosity. He disappears at once, and shows again, in a short time, a little way up the pipe; all their attention is now roused, they are very likely deluded into a pursuit and subsequent capture. This is a bold stroke, but now and then a highly successful one. The decoyman should, at all times, carry a piece of burning turf near his face, breathing on it

to prevent the fowl from scenting him, as well as to keep it alight; for it must be remembered that, when proceeding to use a pipe, the birds are more or less to *leeward*.

He will sometimes find, especially in the grey of morning, fowl paddling unsuspectedly in the very pipe, and far enough up its length for him to hasten to the entrance to intercept their retreat to the pool. For this reason, when visiting a decoy, his approach should be always cautious. Teal may be taken on the calmest day, but Duck not so easily. As the season advances, the fowl become more and more wary and difficult to manœuvre.

A fresh flight of birds early in the winter should be allowed a couple of days' rest, to realize that they are in apparent security; as well as to give them the chance of alluring a more numerous gathering.

Very early in the season Teal may be captured in little batches as fast as they arrive; so also may Duck, if they are the young and unsuspecting birds of the year, discernible by their plumage.

Let it be a golden rule for a decoyman *never* to press his attentions *too* earnestly on fowl that do not seem inclined to enter the pipes. They will become very distrustful after a failure, and their caution will be followed by all the other birds on the pool.*

The most favourable hour to decoy fowl is about noon, and from that time to two o'clock.

By the middle of the day, the fowl will have

* An old trick amongst decoymen to destroy sport was to turn a pinioned bird loose with a feather *through the nostrils* to alarm the rest.

rested from their flight and exertions in procuring food the previous night, and once more beginning to feel the calls of hunger, are no longer heavy and apathetic, as after their arrival in the morning. By the evening they become restless, preparatory to leaving the pool at dusk. The banks near the mouth of each pipe should be the only available spots in the entire pool where fowl can walk up, and this they delight in doing. They will then be in a favourable position for the decoyman's allurements, and as they always choose the banks on the sheltered side of the decoy, they will be conveniently posed for the pipe near them, and which the wind will probably then allow to be worked.

To shut foxes out of a decoy, which they are sure to discover and use if unguarded, a wire netting should be erected, all round both the pool and pipes. It should not be placed close to the water, but fifty yards distant, and must be hidden from view. It will also be useful in keeping the tame decoys from wandering.

I have purposely avoided using technical terms in these notes, as being liable to confuse the uninitiated.

It is scarcely necessary to add that all work, such as mending nets, breaking ice, &c., must without fail be done at night by light of lantern, or the decoy would at once be untenanted, and, what is more, remain so for some time. I will here give plans of the whole concern, and show how to work it, in short detail, and these general instructions will, I trust, make its management still plainer.

In the plan given of a decoy pipe (p. 83) we see the act of decoying in operation. The decoyman is

supposed to be peering through his peephole in the fifth screen, and perceiving he has so far enticed the fowl up the pipe, is sending his dog round one more screen to lure the birds yet a little further. In another instant he will dodge between the two long back screens Y and Z at their opening C, where they overlap. He will raise his hand as a signal to the assistant (if he has one), who is hiding behind the pond end of the long screen Y, well out of sight of the pipe. This man now shows himself with all speed at X. When the wild birds at G, that have been enticed so far up the pipe, see him between them and its entrance, and walking along between the screens and the pipe, they dare not pass him to escape back to the pool by the way they came.* Though the tame decoys take no notice of his presence, the wild birds are greatly alarmed, and rush up the pipe to its extreme end beyond H, in the hope of escaping by following the course of the curve. H is the spot where the ditch and the fixed part of the pipe ends, and at this spot the tunnel-net unhooks. The dotted lines under the netting show the banks of the ditch.

If the decoyman has no assistant—and he will do as well alone—he himself hastens through the opening C, and round the back of the screen Y, to X, and there suddenly appearing, frightens the surprised fowl up the net. Were he to run behind the shorter screens, the birds might see him hurrying past through the openings, and fly back to the pool; when moving along the pipe the other way, as

* The decoy ducks often swim up with the wild birds, as the sight of the dog brings the hope of food to their minds.

which he has enticed the wild birds back to X, where he shows himself to cut off their escape. In the sketch of entrance to decoy-pipe the fowler has fed his tame birds (as shown) a short distance up the pipe. The wild birds that fed with and accompanied them as far as the entrance* have, as is usual, become suspicious that all is not quite right within, and decline to follow their tame brethren up such a suspicious-looking place. They are in the act of returning to the bank they left, or to their companions on the pool, whom they lately deserted to get a share of the grain they saw the tame decoys enjoying. At this moment the decoyman, who has been watching their every movement through the screen A A, to the left of the pipe, pops his dog round the first or second screen near the pipe's mouth (see sketch). The wild birds, though some have turned away, and the others are in the act of doing so, catch sight of the little strange-behaving animal. Their whole attention is aroused at once, and one and all head up the pipe, screen after screen, as the dog is put round them by his hidden master. Their discretion is forgotten in their indignation and curiosity. At last they reach the position they occupy at G in the plan of decoy-pipe.

* If the fowler, on peeping through the screen A A, to the left side of the pipe, sees no wild birds very near, he whistles softly to his tame ones, or shows them the dog round a screen as before described. Should the decoys swim steadily up to the pipe's mouth, they will usually bring a number of wild birds with them. The decoyman then throws some grain a little up the pipe from behind a screen, so that it drifts down to the wild and tame birds at its entrance. He then proceeds as elsewhere directed.

not to be missed ; you will notice, on getting within a few hundred yards of them, that they are paddling in all directions, some here, some there, and some in circles, crossing and recrossing each other as if confused. A little nearer, but yet a couple of shots off, and with one consent they swim away, with the head and back only above water. They then seem to be half their usual size ; you hastily point for the densest cluster ; if you near it, it melts away into small sections of twos and threes, or perhaps divides into half ; you aim for the thickest portion, it divides again ; and, eventually, instead of the fine shot you expected, you find a dozen scattered birds before the gun, and a long thin string of them on either hand. The best plan is, when once within a fair distance, to put Pochard up by making a noise, or lifting a paddle. Before rising they are wont to crowd together. They then fly low and heavily for some yards in their efforts to lift clear of the water, using feet and wings at the same moment. At such times they will, now and again, afford an admirable mark to the fowler. They never dive to escape before firing, though they may often be seen *feeding* within range. They are then seldom together, and offer but a thin shot at best. If Pochard are much followed, they get very wary, and will rise and fly at once when set to. Naturally they are of a lazy disposition, and endeavour to swim away till danger too closely threatens.

A few Pochard, when visiting small inland lakes, become very tame, and though often shot at, are loth to leave. I have sometimes fired at a couple of these birds on a narrow pond, and if one happened

to be killed, the other would swim about as though confused, and uncertain whether to go or stay, on the chance of its unfortunate companion reviving. On open water, as every shooter knows, they never act so tardily. Even when within shot on the water, they take such a hard blow, and, when suspicious, swim so deep, and sometimes dive so quick from the flash, that where you might expect to get your fifteen or twenty birds from the same number of Wigeon, your efforts in the case of Pochard will be rewarded with a mere half-dozen, mostly lively cripples, that will waste much time and powder in retrieving. When resting and unsuspecting, if by good luck you can catch them thus round a corner, they float high and buoyant, as do Duck or Wigeon. Then, if not feeding, a good shot may be obtained on the water as they sit.*

I cannot agree with some writers that Pochard will dive to escape *before* being wounded, or fired at. If *one* be hemmed in by a corner, or up a narrow river, he will *then*, sometimes, dive past in preference to crossing overland. Should there be a few, instead of one, they will take heart, and, rising on the wing, give a chance, perhaps, to the shoulder-gun.

It may be remarked that *all* Divers evince a dislike to flying over the land. They are, probably,

* After firing at a number of Scaup or Pochard, it is, at first, a puzzle to tell how many belong to the shot. They will (if they ducked the flash or were feeding) continue to appear on the surface, as if wounded, for some moments. "There's a cripple—and another—and another!" the young fowler may be heard to exclaim with joy. But instead of the twelve or fourteen birds he sees and counts on, he is perchance, to his disgust, left with only two or three making off in the distance.

aware of their inability to progress ashore in an emergency as can Duck. In frost Pochards remain well-conditioned, for their food, lying below the surface, is not affected by the weather. They will not, however, obtain this so easily if the shallows be frozen. They are unable to feed well in very deep water, and edge along shore if such is the case.

When a belt of ice, caused by *most* severe weather, extended some distance from the shore, I have seen Pochard and Scaup very tame and starved, mere skin and bone. They do not leave the water in search of food as Duck do, or feed on the ooze. Their only sustenance is obtained by diving. The change in their habits of caution, and weight, effected by such a frost as this, is very rapid. I have several times found Scaup and Pochard frozen and dead underneath the ice, and within twenty yards of an open channel. Whether they were puzzled on rising against the ice and so drowned, or starved to death, I cannot say.

The Pochard is closely allied to the Canvas-back of America, and, when shot on fresh water, is of a delicate flavour. When killed in salt or brackish water, it is not a good bird for the table—far from it.

The call of the Pochard is a low and not clear whistle. This bird very seldom nests in Ireland. I have heard of but two instances of its doing so. My old friend, and oftentimes fellow-shooter, Mr. Spaight, of Derry Castle, Tipperary, saw a “Red-headed Diver” (*i.e.* a Pochard), with twelve young ones, in Lough Derg, in the summer of 1880. This gentleman could not be mistaken, for he has lived

on this great lake, fowling, fishing, and bird-hunting for forty years. I have heard of Pochard nesting on some northern waters, but (except in one instance at Lough Beg) cannot, as in the former case, be sure of the correctness of the report.

Pochards usually arrive about the end of November, in small parties; but, with the advent of frost, increase in number up to the end of January. Out of a score of Pochards killed in a day, I have counted not more than three young birds, and perhaps two-thirds of the number would be adult males. It is curious how wildfowl differ in this respect. With Goldeneyes, for instance, it is all the other way, perhaps not one adult male in fifty, but nearly all females and immature birds. With Scaup, the females greatly predominate, but the males are mostly adult.

Pochards may be seen on the south-western estuaries in numbers varying from a dozen to a thousand, and I *have* seen, after a gale, five thousand collected together. They are common on all the inland lakes of Ireland, and are known as "Red-headed Divers" in many localities. Their presence or absence depends much on the weather on the coast; frost will bring them without fail where in mild seasons they are scarce.

After a shot, never pass Pochards that may appear nearly dead, in pursuit of those more lively. Whilst you are chasing the latter, the others will often revive and disappear. Failing to overtake the strong cripples, you perhaps turn back, with the consoling thought that the others are easily to be found. Never was hope more delusive: they are

the hardiest of fowl, and scarcely feel a blow that would kill a Mallard.

By the poor shooters in Ireland, who now and then kill them in the rank pools, they are often called "Bog Wigeon."

Pochard, Scaup, Goldeneyes, and Tufted Ducks,

THE POCHARD (1) AND FERRUGINOUS DUCK (2)

when alighting, curve the tail downward and the feet forward (like a swan) against the water, to check the impetus of flight as they tear along the surface. Lobsters and Shrimps, at times, act in a somewhat similar manner, when giving a backward or checking a forward motion.

THE FERRUGINOUS DUCK (*Fuligula ferruginea*).
In 1879 I obtained, on the east coast, two birds that puzzled me much. They were in immature plumage. I saw them paddling about a creek, with some Tufted Ducks, and took them to be female Goldeneyes from the wing patch, eye, and general contour. They were very unsuspicious, which, at

THE RED-CRESTED DUCK.

the time, I remarked, as being most unusual with Goldeneyes, and I had no difficulty in securing both. Upon closer examination they proved to be Ferruginous Ducks.

Two males of the WOOD or SUMMER DUCK were shot on the Blackwater, in 1848, by the late Mr. C. Ussher, one of which is preserved in the hall at Camphire (Mr. R. Ussher); the other is in Mr. Chute's collection, at Chutehall, near Tralee. Both, probably, had strayed from some private water.

This was most likely also the case with two examples of the MANDARIN DUCK, one of which was shot on the Bandon River, in 1878, by a poor fowler (who said there were five of them together), and is now in the possession of a gunsmith, of Cork; the other was killed by Mr. Connolly, of Killeagh, on the Middleton River, co. Cork, December 11th, 1879.

It would seem that Scaup and Pochard occasionally interbreed, for I have shot old birds with the plumage intermediate in colour between the two species. These birds were always of small size, and of less weight than the female of either species.

A specimen of the rare RED-CRESTED POCHARD or WHISTLING DUCK (*Fuligula rufina*), previously unheard of in Ireland, was obtained by me on January 20th, 1881. It was killed just outside the town of Tralee, in a small marsh, by the fowler from whom I procured it. I saw the specimen before it was skinned and set up by Mr. Rohu, the taxidermist at Cork.

THE SCAUP (*Fuligula marila*) may be seen on every part of the Irish coast except the south (where it is somewhat rare). It is very seldom met with on inland lakes. I never saw it in such situations myself, but have notes of a few instances of the kind. It is curious that the Pochard, so similar in its habits and food, should frequent fresh waters, whilst the Scaup adheres closely to the bays, creeks, and tidal rivers round the sea-shore. Scaup frequent lakes within a short distance of the sea, but it is most unusual to find even a solitary straggler on inland waters. They resemble Pochard

in so many ways that it may be said they come under the description of the latter both as to shooting and peculiarities. They are even harder (if possible) to kill than Pochard, swim just as deep (if not more so) when alarmed, and if wounded are most troublesome to retrieve. On the water it is very unusual to kill a dozen at a shot, but, like Pochard, they will often offer a good flying chance. In many parts of Ireland, notably the Shannon, Galway, Kerry, Dundalk, Donegal, and in the northern marine loughs, I have often seen two to three thousand of these birds together. They are also found singly, in pairs, and in bunches of seven or eight, in every little channel and bay on the coast, except on the southern shore. They are ungainly-looking fowl, especially about the head. The females alone show the dirty white mark round the base of the bill, something like the White-fronted Goose. They arrive early in the season, and may be seen by the middle of October as plentiful as they will be for the winter. Hard weather does not seem to increase their numbers. They never remain to breed.

When met with in twos and threes Scaup are very tame, but if many are together they are wild and difficult of approach. By reason of their dark appearance on the water, and the large bulk of body exposed, no fowl show thicker at a distance, or scatter more when neared. They are most unsatisfactory birds to follow in every way. Their edible quality is far from good, and a successful shot is very seldom made at them. I never obtained Scaup at flight time, but Goldeneyes,

Pochard, and Tufted Duck often. These latter fly from lakes near the sea to the tide, and there pass the night feeding. They are then sometimes shot as they cross overland. On the inland lakes I have seldom known them thus obtained, as the Diving Ducks do not quit fresh waters in search of bogs and marshes at night as do Duck, Wigeon, and Teal. The keeper of the "Beeves Light," near Askeaton, on the Shannon, told me that he had known "Blue-bills" (a local name for Scaup) on

THE SCAUP.

several occasions to be killed against the lantern at night.

Scaup do not appear to be as conscious of noise as others of their kind. What confirms me in this opinion is a fact related by lighthouse keepers, who state that these birds often swim in and out of the pillars supporting such structures whilst the men in charge are talking and moving about above; and, moreover, when the fog-bell rings they do not mind the sound, though other birds at once desert the

locality. I have fired at Scaup from concealment, and found that they will, like Pochard, paddle round a dead comrade as if curious to learn how the deed was done. On my standing up they would at once leave in alarm. Mr. R. L. Patterson writes me word that he has seen Scaup on Clandeboy Lake, about three miles from the sea. This water is about halfway between the two marine loughs of Belfast and Strangford, so that Scaup flying from one to the other are intercepted by and rest on Clandeboy; but this is hardly the same as finding them far inland.

THE TUFTED DUCK (*Fuligula cristata*) might be mistaken at a distance for an immature bird of some other species, such as the Scaup, Pochard, or Goldeneye, for a very small proportion of those met with possess the long curved crest that characterizes the adult male. They are now and then shot on the south coast of Ireland, but especially frequent the inland lakes, where they are more common, and known as "small black divers." In the bays and estuaries they are also found in large numbers, particularly in the north, but in the south and west of Ireland they are seldom shot on the coast. They are not nearly so shy as other diving ducks, nor so hard to get near. A wounded Tufted Duck which I brought home fed from the hand in a few days, whilst Wigeon, Pintail, and Pochard, after a month in captivity, were still wild and untamed.

This Duck nests in several parts of Ireland. I have more than once seen young broods, but never found the eggs or nest. It may be said to breed yearly on the great lakes through which the

Shannon flows. The Rev. G. Robinson writes that he has seen the old birds and the young in the summer on the southern shore of Lough Neagh. He says that it also nests on the neighbouring Lough Beg.

Mr. R. Evatt, of Mount Louise, co. Monaghan, who for sixty years has delighted in studying the natural history of his county and its birds; tells me

THE TUFTED DUCK.

that the Tufted Duck brings forth its ragged, sooty-looking little brood every year on the lake in his grounds.

In Belfast Lough, Mr. Patterson writes that he has seen fully a thousand together. On Lough Corrib, Lough Derg, and Lough Ree, as well as on most of the northern lakes, they may be found in numbers during the winter, at all times, resting in

the open, or feeding in the shallow water. They seldom, however, offer a good shot, and will dive about the shores independently, though in considerable numbers.

The head of the adult male is of two shades, metallic green and violet, with pendant feathers, sometimes fully three inches long, curving from the top of the head down the neck. I never saw these raised, and doubt the bird being able to do so under any phase of excitement, as can most crested wildfowl.

Tufted Ducks are late visitants. I have seen none before December 1st, and then, though mild weather, they have suddenly appeared in numbers. They may be seen on the lakes till the end of March, or even later.

THE GOLDENEYE (*Clangula glaucion*), like the Pochard, frequents inland lakes in some numbers, but is always a wary bird, and difficult of approach. The wings of this species are so short and stiff in proportion to its weight and size, and are forced to beat so quickly to project its body, that a distinct whistle may be heard as it flies by. From this sound it is often known as "Whistle-wing," or "Rattle-wing." Another local name is the "Magpie Diver," a very descriptive one by reason of the black and white plumage of the adult male. These mature males are, however, not often met with, and bear a small proportion (perhaps one in fifty) to the young males and females. But though rare on the coast, they seem to fancy inland fresh waters. I have seen a score together, interspersed with about the same number of females and young, on Lough Derg and Lough Ree (Upper Shannon).

On the south coast I have noticed from one to five hundred dark-coloured Goldeneyes with only a couple of light ones among them.

The young birds and females are still known as "Morillon" in various localities, and even to this day are thought by some shooters to be a distinct species. They are chiefly shot by fowlers who lie hidden among stones and banks along shore; for approaching them on the water is usually a waste of time, and when obtained they are unfit for food.

Goldeneyes very seldom paddle away from a punt, but prefer rising, which they will do at a long distance if pursued. They do not swim low and buried, like Scaup and Pochard, on any occasion, except of course when wounded; and though the latter are not often seen on wing save when put up, Goldeneyes continually fly restlessly to and fro, especially in windy weather. They are quite as expert in diving as Scaup and Pochard. They seem to have the power when rising from the bottom to spring on wing into the air with the same upward shoot. They do not appear to hesitate a couple of seconds on the surface to recover breath ere flying, as will Scaup and Pochard. When setting to a number of Goldeneyes you will remark that the old black-and-white males exhibit far more caution than the others. They will rise from the midst of the gathering with a great splashing and wing-whistling, leaving the rest to follow when danger more closely threatens.

To get within shot of a number of Goldeneyes is an unusual feat on open water. The man, or men, and punt that can do this need not fear failure

with other fowl. Scaup or Pochard that may have been under water at the moment of firing, after finishing their dive for food at leisure, will startle the fowler by rising close to him as he pushes up to gather his cripples. Goldeneyes seem to know when their companions are leaving the surface in fright, and will at once spring up and follow to join the rest. I never knew them incautiously rise within range after a shot, like the other species alluded to. They

THE BUFFEL-HEADED DUCK (1) AND GOLDENEYE (2).

are late in arriving, and are not found in any number till the middle of December. They leave with the Scaup and Pochard about the end of March or first week of April, flying down to the tide, and collecting there ere starting for their breeding haunts. They are more or less common round the coast of Ireland and, like Pochard, frequent inland lakes in considerable numbers.

When observing Goldeneyes through a good glass, I have more than once plainly distinguished among

the dark-coloured birds (immature males and females) a much smaller kind, also darkly plumaged. I only once saw a light plumaged specimen of this smaller species, which I knew to be a nearly adult male. It differed from the male Goldeneye in having a white spot, or rather streak, above and behind the eye, instead of under and before it. I followed this bird for two days, feeling sure that it was a male BUFFEL-HEADED DUCK (*Clangula albeola*), but without success. One morning I found it swimming in the midst of a score of other diving ducks. Now, I thought, was my chance, but no; out of a dozen picked up the stranger was not among the slain, and I never saw him again. This bird two or three times swam alongside an old black-and-white male Goldeneye, and appeared to be about one-third smaller.

THE COMMON SCOTER (*Ædemia nigra*), though plentiful on some parts of the coasts of England and France, is rare in the south of Ireland, more than six to eight being seldom seen together. At the wide entrance to Castlemaine Bay, co. Kerry, and near Inch Point, a dozen or more may sometimes be noticed. Lord Ventry informs me that he has picked up water-soaked and storm-driven Scoters on this Point, scarcely able to breathe. Their rich, velvety black plumage, and orange knob at the base of the bill, distinguish them at a long distance, and they may be easily known from the two other species of Scoter, which are more rarely met with, by their smaller size and the absence of white on the wing or neck. They are seldom seen alone, and revel in the sea, whereon they ride in the roughest

waves, the surf never apparently breaking over them, as they float like black corks on the foam.

On the northern marine loughs and in the bays, especially at Belfast and Dundalk, Scoters abound every winter, sometimes in thousands. At Wexford

THE COMMON (2), VELVET (1), AND SURF SCOTERS (3).

I was shown one which had been stuffed, as a rarity, and at Tralee, Galway, and Achill they are considered uncommon. I never heard of their visiting inland lakes, although in England it is by no means an uncommon thing after a gale to meet with a soli-

tary Scoter on fresh water at a considerable distance from the sea.

THE VELVET SCOTER (*Ædemia fusca*) is comparatively rare on the Irish coast. One in Mr. Nelligan's collection, at Tralee, was shot at that place. Several years since I obtained a couple off the east coast, and have seen perhaps a dozen others. Most collections can, however, boast Irish-killed specimens. I have never met with the Velvet Scoter in a harbour or estuary; always at sea, at some distance from land, and on no occasion on the western seaboard: oftenest when making a passage, and so not prepared for shooting. The fishermen of the north and north-east coasts have convinced me they have not unfrequently met with this bird in small bunches of five or six, far out at sea, and where the Common Scoter would not be likely to be found; besides which, these men know the common species well, and have described to me with accuracy the white-barred wing and eye-spot of the Velvet Scoter.

Mr. Lloyd Patterson, in his work on the Birds of Belfast Lough, records his having seen a couple of Velvet Scoters in that estuary a few years ago. This bird is easily distinguishable from the Common Scoter by a white patch on the wing, more or less visible in either sex, whether immature or adult, and by a white spot under the eye in the male, and in front as well as behind the eye in the female.

THE SURF SCOTER (*Ædemia perspicillata*) is a much rarer visitor to the British Islands, and, so far as I am aware, has only been met with in Ireland on two occasions. One was killed in Belfast Bay

in 1846, as noted by Thompson, a circumstance which, by some oversight, Mr. Patterson seems to have overlooked, and has omitted this species from his book. A second was shot by Mr. E. Hanks, in October 1880, at Clontarf, co. Dublin, and was presented by him to Mr. Bradshaw, of the Rectory.

The adult male of the Surf Scoter has a conspicuous white spot on the forehead, and an elongated white patch on the nape.

THE EIDER DUCK (*Somateria mollissima*), although a rare visitant to the Irish coast, has several times been obtained. I bought a female bird of this species from a dealer in Wexford, in January 1876, as "a very large wild duck." Mr. Nelligan, of Tralee, has two in his collection, one shot near Spa, Tralee Bay, in November 1864, the other, a male, killed near the same place a few years later. In December, 1878, I shot a young female Eider in Cork Harbour, and Mr. L. Patterson has noted one as killed in Belfast Bay in 1877. Mr. Warren, of Ballina, tells me that in March, 1870, a pair of Eider Ducks, both male birds, were observed by him day by day near the mouth of the Moy estuary. One was shot, the other remained throughout the summer and baffled all his attempts to obtain it. The fishermen knew it as "the big black duck." It used to feed up the river at high water, within a mile and a half of the town of Ballina, but at low water always remained outside the sand-bar in the sea. It continued acting thus till October, when Mr. Warren found it up a small creek, and after a long chase shot it. He tells me this bird never tried to fly from his boat, but dived continually, and when

subsequently examined, showed no sign of any old or recent wound. Captain Kinsey Dover shot a fine male Eider Duck near Ballina some years since, and presented it to the Dublin Museum.

THE LONG-TAILED DUCK (*Harelda glacialis*) is rarely seen except in the north of Ireland. One was shot at Killorglin, co. Kerry, in 1871, and is in Mr. Nelligan's collection at Tralee. I purchased a fine male from a game dealer at Waterford in

THE LONG-TAILED DUCK.

the winter of 1879, and know of three others obtained in Cork Harbour of late years, one by myself in January 1878. These are some of the few instances I have noted of this duck occurring in the south. In the north it is, though scarce, not quite so infrequent. Mr. Warren, of Ballina, tells me that in 1856 he saw fifty together (nearly all males) feeding outside the bar at the entrance to the Moy estuary. Since that date, he adds, that

though pretty regular visitants in winter to his district, he has never observed more than a few at a time. Yet their appearance, though irregular, is nevertheless too frequent to be remarked upon as curious.

Captain Malet, R.N., when snipe-shooting near Ardfert, co. Kerry, a few years ago, picked up from a tuft of grass a live and uninjured Long-tailed Duck that his setter stood to, and within a yard of the dog's nose. This bird is often locally known as the "Long-tailed Shelduck." For the derivation of the name "Shell," as generally applied to ducks which present a black and white, or pied, plumage, see the account of the "Redbreasted Merganser," and "Sheldrake." Mr. Gage, who owns and lives on Rathlin Island, off the Antrim coast, remarks that immature birds of this species are not uncommon there.

CHAPTER VI.

Mergansers — The Goosander—Redbreasted Merganser — Hooded Merganser and Smew.

OF the genus *Mergus*, or Merganser, provincially known as "Saw-bill," there are two well-known species,—the larger, Goosander, and the smaller, Redbreasted Merganser; while the still smaller Smew (*Mergus albellus*), is an occasional visitor to Ireland in winter. The Hooded Merganser (*M. cucullatus*), a rare straggler from the American continent, has so very seldom been met with in the British Islands as to make its occurrence here an event of considerable interest to naturalists. To its appearance in Ireland I shall presently allude.

THE GOOSANDER (*Mergus merganser*) is the largest and handsomest of its genus. It is a fine bold-looking bird, and, when first killed, exhibits an exquisite tinge of cream colour on the breast. This delicate tint, however, is hard to preserve, and after some time fades to a dirty yellowish white. It then gives but a poor idea of the beauty of a recently killed specimen. An adult male Goosander is not often to be met with, and is always noticeable from its striking appearance. These birds are adepts at diving, although in this respect one Merganser is as good as another. Mergansers have longer wings and lighter bodies for their size than the

diving ducks, and are therefore more powerful on the wing than the latter. Their actions, like those of other divers, when alighting, are governed by their power of rising. Feet and legs being near the tail, they cannot fly from or pitch on the water with the facility exhibited by the true Ducks. On the north and east coasts of Ireland I have seen from three to five Goosanders together, mixed with, perhaps, twenty to thirty of the Red-breasted

THE GOOSANDER.

species, yet not an adult bird amongst them of either kind. Our early naturalists were much puzzled about this tribe of birds, and described the adult, the female, and the young male, as three distinct species. In structure they are admirably formed for fishing. Their prey, once caught, has as much chance of escaping from the serrated beak as has a roach from the mouth of a pike. As in the case of the pike, the saw-like teeth on the edges of the mandibles curve inwards.

Goosanders are certainly rare visitants to Ireland, yet eight or ten, and even more, have come to my knowledge as having been procured, in a hard winter, on the north and east coasts. In the severe January of 1881, Goosanders were shot in every part of Ireland, and were more plentiful than they were ever known to be before. As many as eight were seen together during that month on the Blackwater, near Cappoquin, and more than one was shot.

THE REDBREASTED MERGANSER (*Mergus serrator*) is generally more or less common round the coasts of Ireland. In Cork Harbour, throughout the severe winter 1878-79, I often noticed, to the eastward of the man-of-war roads, from one hundred to even five or six hundred of these Divers together. Their favourite habit is to drift with the tide to a certain point, whence they will rise and start afresh. When the tide changes they reverse this performance. Of all wildfowl, except perhaps Goldeneyes, they are the most restless and wary; never quiet, always swimming, diving, and flying, and to no apparent end. I never yet saw one at rest with head down, and bill tucked under the wing. They are ever on the look-out, and though there may be hundreds on all sides, they cannot be approached within a long shot, without the best of luck and care. Any fowler who can now and then push his punt within shot of these birds may rest assured that he is most favourably equipped for shooting. It is the best of practice for a beginner. He will be surprised how tame Duck and Wigeon will afterwards appear. All Mergansers, from their

piscivorous habits, are unfit for food, but offer from time to time such tempting shots that it is not in mortal to pass them by. Many collectors will, however, be delighted to get a couple of adult birds, as they are very beautiful, and, though tolerably common, are not easily obtainable. The handsome black-and-white pied males are in small proportion to the others, perhaps one in twenty. Country fellows and poor shooters, by waiting for hours behind rocks and shelters, kill these birds as they dive along a deep shore in search of food. They are then disposed of with more worthy fowl to the dealers, who resell them in towns to ignorant folk as extra dainties, by reason, I presume, of their quaint aspect. The wildfowl of that particular neighbourhood are then voted rank and fishy, and considered to be not worth powder and shot; for he who has once tasted Merganser will never care to do so again. They prey exclusively on fish, and Colonel Cooper tells me that on the Sligo estuaries, where they are very common, they are considered quite as destructive to young salmon as are Cormorants. They breed every year on the rushy islands of Lough Derg, Lough Ree (Upper Shannon), Lough Corrib, Lough Erne, and in several spots round the coast. They build in cracks and crevices in the rocks and shore, but I never saw them choose rabbit-holes, like the Shelduck, though these might be near and convenient.

Mr. Pike tells me they nest annually on a small rocky island in the sound of Achill, which belongs to him; and that he has shot the flappers swimming with the old birds. He adds that the female lays

her eggs in the crevice of a bank, and with the sea-pink growing around. I learn from Mr. Warren that Redbreasted Mergansers breed also in Lough Conn, and Lough Cullen, county Mayo. This species may be seen late in the spring, and long after other wildfowl have departed. I have noted them on the coast in May, and Mr. Warren tells me that he saw thirty-seven together May 20th, 1881, in the Moy estuary. They appear

THE REDBREASTED MERGANSER

again in plenty by November 1st. By April the 1st they present a very light and grey dappled plumage, and then appear almost white against a dark background. They are termed "Shelduck" by the fishermen and fowlers on the inland lakes, who, as a rule, have never seen or heard of the true Shelduck (*Tadorna*), a circumstance which favours the suggestion already made under the head of that species, that the name is derived from the word

sheld, meaning pied, or particoloured, a term equally appropriate to the Merganser. "Spear Wigeon" is another name bestowed on the latter bird on account of its sharp serrated bill.

THE HOODED MERGANSER (*Mergus cucullatus*) is a rare visitor from America, and I am not aware that an Irish-killed specimen exists in any public museum in Ireland. There is one specimen of this Merganser in Mr. Chute's collection of Kerry birds at Chute Hall, Tralee; and Waters (an accurate

THE HOODED MERGANSER

compiler), in his "Natural History of the Birds of Ireland," 1853, has noted another shot in Ireland, in the possession of Sir R. Levinge.

I have obtained three. One pair was procured in the severe frost of December 1878, in Cork Harbour, and the other bird in the yet more severe weather of January 1881, on the north coast of Kerry. I heard of a solitary bird of this species being shot near Sligo the same winter, but I believe it was not preserved.

Mr. Glennon, the Dublin bird-stuffer, informs me

that during his long experience he has only received one specimen of this bird, and that some years ago.

The large black and white fan-shaped crest is very striking and quaint, and the chief beauty of the bird lies in this peculiarity. From what I saw of those I shot, they appeared to fly faster and with a more darting motion than other Mergansers, and though diving with equal facility, not excelling their congeners.

On one occasion a Hooded Merganser that I had crippled made no effort to dive, but swam low in the water like a wounded Teal with the crest laid flat and smooth, the head looking small and black, very different to its usually handsome and bushy aspect.

Two of these birds haunted a creek in company with some Redbreasted Mergansers, and though I had ample chances of observing their motions, feeding and flying, through a glass, they were too wild to get within range of. At length, after many attempts, I was one day fortunate in finding them deserted by their companions, and shot them both. The third bird, though wounded near the shore, was eventually killed two miles from land after a long chase.

Judging from the pictures given of them in illustrated works, both this bird and the Smew are much smaller than might be supposed therefrom. The body of the adult male of either species is less than that of a female Wigeon, and not bigger in bulk than a fine Teal.

THE SMEW (*Mergus albellus*) is an uncommon

visitant to Ireland, though not nearly so scarce as the last named. In the north of Ireland it is not rare in the immature stage. A few years ago I obtained a young male and female near the entrance to the Kenmare estuary, from a local fowler who had just shot them. A pair in perfect plumage were shot in Tralee Bay, and are in Mr. Nelligan's collection at Tralee. The fowlers of Wexford, and the north and north-eastern coastmen, have described the

THE SMEW.

Smew to me as well known to them in past years by the name of "White Wigeon;" it is also called "Weasel Wigeon," from some supposed resemblance to that animal about the head, which in the female is very small, and coloured like a Weasel. It is not so unfrequent in the extreme north of Ireland, and there is a fine series of native-killed specimens in the Dublin Museum. Within the last

few years, as I am informed by the Hon. B. Fitzpatrick, two were shot at Abbeyleigh, Queen's County. Mr. Patterson records his having obtained a fine specimen from Lough Neagh. I have four or five times seen Smews in good plumage on various parts of the Irish coast, but have not personally ever shot an adult specimen, but merely a couple of immature birds. Mr. Williams, the well-known Dublin bird-stuffer, tells me he has every winter picked up a few young Smews in the markets, but that the old male is very rarely obtained.

CHAPTER VII.

Divers—Great Northern Diver—Black-throated Diver—Red-throated Diver—Gannet—Cormorant—Shag—Grebes.

OF the true divers belonging to the genus *Colymbus* three species are met with in the British Islands—the Great Northern, the Red-throated, and the Black-throated Divers. The two first-named are common enough at certain seasons, the last being of far less frequent occurrence. Nearly related to these are the Grebes (*Podiceps*), of which we have five species—the Great Crested, the Red-necked, the Slavonian, the Eared, and the Little Grebe, all likely to be met with by the wildfowler, although the first and the last are much commoner than any of the others, since they breed in many parts of the country on lakes and sedgy pools, where there is sufficient aquatic vegetation to conceal them from view during the nesting season. While reviewing the diving birds, we can scarcely pass over the Cormorant, and its congener, the Crested Shag, both of which are sure to be frequently encountered by the fowler in the course of his excursions. It will be convenient to notice all these divers in the order named.

THE GREAT NORTHERN DIVER (*Colymbus glacialis*), when in adult summer plumage, is a large and remarkably handsome bird, decked in velvety black,

... snowy breast, barred
... shaped spots on the
... long. He is a prince
... with ease in the tumbling
... for some moments,
... other fish, athwart his
... catches head first,
... head and neck.

W. W. RYDER

... water ...
... at once ...
... a great ...
... see John ...
... now ...
... the p

really alarmed, or wounded, I have timed the immersion of this bird at ten minutes. His rise and dive are then almost instantaneous. On several occasions I have lost sight of the bird completely, and though a calm and open sea extended on all sides, I never saw him again. This I attribute, not so much to the bird having dived an incredible distance, or to its having the power, as some writers state, of remaining indefinitely under water, but rather to the fact of its having risen and disappeared at a spot towards which the eyes were not at the moment directed. The repetition of this a few times would soon put such a Diver beyond the reach of ordinary vision.

Let me here dissuade any one from crediting what I have read with wonder and amusement, that this Diver slowly sinks *tail first*, and gradually immerses the body till the head and then the bill are the last to disappear from view. Such a foolish story is only on a par with the reports concerning the origin of the "Bernicle." The bird takes a quick downward sliding dive from the exact spot it may be resting on, invariably head first, for which motion, and its subsequent journeyings under water, its form is perfectly adapted by nature. I have observed

d in all positions of alarm
ing down stern first would
ow shot with the feathers
water would then be in
feet, and natural tendency

writing to me on the
ably described the sub-

mersion of this bird and the Red-throated species :—

“ Their method of diving I have watched carefully, and was at all times much struck by their marvellous facility in going down. A bend of the head forward and downwards till the point of the bill is in the water, followed by the instant disappearance of the bird without the least splash ; a few small circles on the surface being all that remain to mark the point of departure from view. One thing I noticed particularly, and that was the power of these birds to float high or low at pleasure. One moment they may be seen swimming high and buoyant as a duck, the next with not much more than the outline of the back above water. Is this due to the bird taking in or emitting air, to an unusual effort bodily, or to a combination of both ? ”

When once established in its winter quarters this bird is seldom or never seen on the wing. A pair will usually choose a small bay or creek, and there remain for the season. They then appear to trust for safety to their wonderful gift of submersion to avoid danger. The Black and Red-throated species will as often as not rise and fly at once when pursued or when moving about, but if wounded the latter can dive with the ease and power of their larger relative.

On a calm fine day in mid-winter, the Great Northern Diver may be observed busily fishing or lolling at rest on the surface, head and neck sometimes prostrate along the back, and presenting the appearance of a badly wounded bird.

From time to time they will roll first one wing and then the other under the water, showing the white underside in the motion ; when in this lazy

mood, caused perhaps by the pleasant weather, you may often obtain a good chance, if care be taken to make the *first* shot the surest. Once alarmed they present, as is the habit with all diving birds except Goldeneyes, only the head and outline of the back as a target, and swim so low and buried, that they afford a very insignificant mark to aim at. The chances are, if not killed outright, or badly disabled at the first shot, you are led a wearisome chase, and finally left empty-handed, after much powder has been expended in vain. They are, however, well worth a little trouble, for if not in sufficiently good plumage to please a collector, the large white breast makes the perfection of a fowling-cap, and three such skins an excellent waistcoat. Impenetrable to wet, tough as leather and warm, the plumage is of a most suitable kind and colour for a fowler.

A bird of this description, caught in a trammel net, I kept alive in a pond for some weeks ; though the wings were perfect, it made no effort to fly away, and could scarce break the fall when lifted some yards and dropped into the water. When diving for fish, which he freely took the day after being caught, I noticed the wings were used in propulsion about half extended, but not invariably so. One morning a cat, that had come off second best in a nocturnal assault, was found dead on the bank, with a pierced skull. The beak had entered the eye, and what the marauder might have judged an easy prey proved a veritable *tartar*.

The Great Northern Diver has been supposed to breed on the western shore of Erris, and the neighbouring islands. I have known one to be shot in

that locality so small and young, that I doubt whether it could have arrived there from another country ; but my opinion is that the Great Northern Diver only nests on inland lakes and in spots where it can at once glide into the water in case of danger. Did it lay its eggs on a tidal coast, it might be left fifteen to twenty feet above the water's edge every tide ; or else high and dry on shore, whence it could not quickly escape when necessary, nor could it, except at high water, return to its eggs after feeding. It is the last bird in the world to fly to or from the nest.

Though it is an unnatural or, at least, a *most* unusual attitude for this bird to be viewed upright on stone or rock, or on flat bare ooze, it has sometimes happened to me to see it in that position.* In Tralee Bay, co. Kerry, I have on several occasions observed these birds *resting* bolt upright with the erectness of a guardsman. An ebb tide in that estuary sometimes leaves dry a vast expanse of slob-land almost simultaneously, this great level surface being intersected by small channels. I have distinctly observed Great Northern Divers entrapped, as it were, evidently loth or incapable of taking wing, and unable to dive or swim in the rapidly shallowing water. They simply remained motionless as the tide left them, and ended by sitting as described, on the bare ooze. I have walked up to them on perceiving their species through a telescope, and even fired shots, but they seemed totally unable to

* As before noted, though this diver will not *rise* off the breast for the purpose of *walking*, yet I have no doubt it will *rest* in an upright attitude.

rise and fly. They quickly took to their heels, however, and flapped and floundered to the nearest water at a great pace ; their motion being similar to that of a Cormorant when first trying to lift clear of a calm sea. The local fowlers are well aware of this curious habit of the "loons," as they term them.

The average weight of a fine specimen, though it may not perhaps be quite adult, of this Diver I have found in my experience, after weighing over a score, to be nine pounds. The old birds (except the females) are by no means the heaviest. The most perfectly plumaged male I ever shot, with glossy green-tinted head (they are never full feathered till they exhibit this shade of colour), weighed under nine pounds, and was in very good condition. The male varies greatly in size, far more so than the female. When adult, however, they are similar in plumage.

Mr. R. Evatt, of Mount Louise, tells me, "Many years ago I well remember that a pair of Great Northern Divers nested on a lough in co. Monaghan, but a local gamekeeper shot the male bird, which I preserved for my collection. They used to fly to the sea, some twelve miles distant, to fish, and on returning I have seen them travelling at a very great height, and when over the lake fall to the surface much like a Gannet."

This Diver is to be seen in the immature state throughout the winter on every part of the Irish coast, and in all the bays and estuaries of Ireland, but is seldom met with at that season inland. An adult bird is rarely obtained. Near the mouth of the Shannon, off Scatterry Island, with a smooth sea,

I have counted twelve to fourteen of these birds in sight at one time; very few, however, showing the rings round the neck or the spotted back at all well developed.

The captive Diver above alluded to could not walk when placed on land, but shuffled along on the breast. I do not think a Great Northern Diver could possibly rise from level ground, or fly from land, unless able to precipitate itself from some elevation. This opinion is confirmed by the fact that these birds are sometimes found inland, flapping and jerking helplessly along the ground, and are, in consequence, easily captured.

I once caught one thus, and thinking it wounded, placed it on a small artificial lake, when, contrary to my expectations and previous experience, it at once rose and flew away, first flapping along the surface as all Divers, and especially Cormorants, do before they can clear the water and use their wings freely. This bird was, however, captured inland late in the spring, and, being probably on its migration, was more likely to fly than usual.

At a long distance a Great Northern Diver may be distinguished by its actions from a Cormorant. The latter always points the head and bill upwards, the former carries it horizontally. The old anti-Jacobite ditty of "Lillibulleroo," when quickly pronounced, is no bad imitation of the Great Northern Diver's wild cry.

A Diver of this species was shot by the Hon. B. Fitzpatrick, at Abbeylaxey, Queen's County, sixty miles inland—a most unusual incident.

The legs of all Divers are more or less flat, and

much narrower than those of Ducks. This enables the shank to be drawn forward and pushed back, with as little resistance to the water as possible.

THE BLACK-THROATED DIVER (*Colymbus arcticus*) is of rare occurrence in Ireland, and almost impossible to obtain in the adult plumage, with the black throat. Immature birds, though very seldom procured, may not perhaps be so uncommon if specially sought for; and what at a distance might be taken for the Red-throated species, would, very probably, now and then turn out to be the Black-throated. It is slightly larger than the Red-throated Diver, and when adult is very handsome; the markings on the throat, back, and neck being vivid and boldly arranged. The white spots on this Diver and the Red-throated, when young, are not as regularly placed side by side from the neck to the tail, as in the Great Northern, but are disposed straight and transversely, like snowflakes lying as they fall without any apparent arrangement. The females and young of both species are indistinguishable unless inspected by a very competent authority.

Mr. Williams, the taxidermist of Dublin, says, "I have never in my long experience of bird-preserving received an adult specimen of the Black-throated Diver; but I am confident mature birds visit our bay (Dublin) every year, for they have more than once been seen, and even wounded, by a reliable naturalist of my acquaintance. Four immature birds of this species are all I have had through my hands."

THE RED-THROATED DIVER (*Colymbus septentrio-*

nalis), is of frequent occurrence on the Irish coast, and is now and then seen inland. As with the last-named, the young birds and females greatly predominate. Ten might be shot in the spring, and not one with the red-throat from which the bird derives its name. These birds are often to be found following the sprats, on which they feast beyond belief. I have, at various times, shot at, and, as I at first thought wounded, one of these divers, whilst engaged with a shoal of such fish. The bird would dive but badly, and refuse to fly as usual. On my pushing nearer, it would rise after several flapping efforts, and fly heavily off. What hindered an earlier departure was not a gunshot wound, but rather the internal weight of fish, some of which being disgorged, as ballast thrown overboard, enabled a better flight. The fact of afterwards finding the rejected sprats strewn on the surface, afforded a sure proof of what a glutton had been disturbed.

Whether inwardly laden with fish or not, these three Divers are very slow in rising from the surface; a Cormorant is even more so, and a Gannet finds most difficulty of all in getting clear of the water. A rough sea will always enable a Diver to rise more freely and quickly than is possible from smooth water. See a Gannet lifting from a calm surface, and mark what a laborious effort it is for the bird to get clear, and so use its long wings with full effect. Though the Red-throated Diver flies often, the Great Northern very seldom does so. That the latter *can* fly, however, there is, of course, no doubt; I have many times seen them do so, but only at sea.

They could never rise, however, from the nest, and, unless on the verge of the water, could not escape from their enemies. They seem to experience much difficulty in lifting from a calm sea, even with the aid of wings and feet, and the elasticity of the water. Many other birds that walk, or rather crawl on the breast, as, for example, the Shearwaters, are equally helpless, if caught unawares, on level ground.

Red-throated Divers fly low, with outstretched head and neck, and, having hardly any tail, give the idea (when in the air) of a stick or bottle, with the wings at the thicker end, and are then often mistaken for the larger species. Grebes present a very similar aspect in their flight. The call of both the Red and Black-throated Divers is loud and grating. They seldom if ever cry except on the wing. Their hoarse barking note is then most discordant, differing much from the shrill gurgling yell of the Great Northern bird. The last once heard can never be mistaken. Except, perhaps, Gannets and Cormorants, no birds have greater powers of swallow; the mouth opens as far as the eye. The captive Diver before referred to took down with ease the largest mackerel.

Whilst alluding to the swallowing powers of sea-birds, I may relate that a gentleman, whom I know well, informed me that he once killed a Great Black-backed Gull, on the Kerry coast, which on being shot disgorged a four-pound Mullet, with which it had been seen previously engaged on the beach. By picking and rending, the bird had actually succeeded in taking it down whole.

I have shot an adult Red-throated Diver as early as the 27th of February with a perfect red neck—the only one I ever saw with a semblance of this colour in early spring. But I have more than once seen them in January with a dark shade under the throat; on one occasion so much so as to lead me at first sight to think it was the Black-throated species I had obtained. This dark shade is probably the red colour in embryo. I have obtained females of both the smaller Divers with coloured necks, though less vivid than in the males. The female Great Northern, however, closely resembles the male—when adult, if not exactly.

A local name for the Red-throated Diver is Hollands Auk, the derivation of which I could never discover, unless it be regarded as a species of Auk which comes to us from Holland, and would be well known to the fishermen of the North Sea.

THE GANNET (*Sula bassana*) is capable of taking a still wider gulp than the Divers, for the upper mandible in this bird is hinged near its base, and enables the bird to open the mouth for a larger morsel than it otherwise could do. The mouth of a Cormorant, though not possessing so wide a gape as a Gannet's, reaches beyond the eye.

In Ireland the Gannet has been ascertained to breed on the Fastnet Rock, Cape Clear, as well as on the Skelligs. It also breeds numerously on the Bull Rock at the entrance of Bantry Bay. There are three rocks here, the "Bull," "Cow," and "Calf," lying a few miles off Dursey Island, the westernmost land of County Cork; the "Bull," on which the Gannets breed,

being the one furthest from shore. Until recently there was a lighthouse on the Calf Rock, but a terrific gale in the autumn of 1881, after first carrying away the lantern, broke the lighthouse in half. The men in charge, after ten days of terrible suffering from wet, cold, and hunger, and after many attempts to rescue them had been made, were eventually brought off safely by the gallant efforts of a local pilot—O'Shea.

THE COMMON CORMORANT (*Graculus carbo*) is resident in Ireland, and common on most parts of the coast. THE SHAG, Green Cormorant, or Crested Cormorant, as it is variously styled (*Graculus cristatus*), is also resident, inhabiting all parts of the coast; but generally less numerous than the common species, as it is never seen inland. Cormorants nest a long way from the sea in several parts of Ireland. On the Blackwater River, co. Cork, for instance, they breed every year in the cliffs over the stream here and there below Mallow, at least thirty miles from the tide.

The nostrils of the Cormorant are very peculiar. Dr. J. C. Ewart, having had his attention directed to the fact that Cormorants during a long flight, and for some time after roosting, hold their heads agape as if panting, presumably due to a remarkable condition of the nostril, undertook an anatomical investigation of the latter point with the following results, which he published in the Journal of the Linnean Society (1881, *Zoology*, p. 455):—"The external nostril in the Cormorant is a mere slit, situated at the end of a shallow superficial groove, which runs backwards along the beak parallel with

its lower edge, and lying between its lower and middle third. When a bristle is introduced into the slit, it never succeeds in forcing a passage into the nasal cavity. If the skin which forms the outer boundary of the slit is carefully reflexed, a groove is exposed which runs from the external slit-like nostril to a narrow canal, lined apparently by modified mucous membrane. This canal, when the mucous membrane remains, is externally from $1\frac{1}{2}$ to 2 millim. in diameter; but it rapidly diminishes, and appears to end blindly. In all the specimens examined, however, when the skin has been reflexed, it is possible to pass through this canal, without forming a false passage, a bristle about the size of an ordinary horse-hair—*i.e.*, less than 1 millim. in diameter. The bristle is more easily passed in young birds than in old ones: this seems to be due to the osseous canal being relatively larger than in the former. Almost immediately beyond this narrow passage is the large nasal chamber, lying above and internal to the palatine bone, and in free communication with the buccal cavity. The mucous membrane lining the nasal chamber has the same structure and the same nerve-supply as in other aquatic birds. The nasal region of the Cormorant, and to some extent also of the Gannet (*Sula*), thus differs chiefly from the nasal arrangement in other birds—(1), in having a very small external nostril, the passage in this slit-like aperture being almost obliterated; (2), in having the osseous canal only $1\frac{1}{2}$ to 2 millim. in diameter externally, and scarcely $1\frac{1}{2}$ millim. at its narrowest part; and (3), in having the nasal chamber in very free communication with

the mouth. This state of things, it may be presumed, explains the gaping of the bill, in the case of the Cormorant, to obtain air needful to sustain the increased activity of respiration which is produced by the exertion of prolonged flight."

There are five species of Grebes, all of which are to be met with in Ireland from time to time. Idle moments may be passed chasing the largest (the Great Crested) if it cross your path; but as with the *Colymbi*, save for a fowling-cap, waistcoat, or lady's dress, such a chase is only so much time lost. How much of *that* precious article may be wasted following a Grebe, those best know who have tried it. As before stated, the first shot should be the surest. If you fail, your chance on open water is a poor one, unless you can edge the bird up a narrow creek. When cornered he may then fly within range, as he is passing back to the open water.

THE GREAT CRESTED GREBE (*Podiceps cristatus*), without being numerous, is fairly common to the harbours and estuaries of Ireland. It may be observed to choose certain spots which it frequents throughout the winter, often alone and sometimes in couples; but it usually haunts inland lakes, where a few breed regularly.

The Great Crested Grebe forms its nest chiefly of *Villarsia*, sometimes of the *Galium*, or bed-straw, which, growing to the surface from five or six feet depth of water, it utilizes both to make the nest and securely moor it as well. The four or five long white eggs when in the nest are only just clear of the water, and the nest rises and falls with any slight elevation or depression of the tranquil surface

of some little bullrush-protected recess in the lake or pool chosen. It is most difficult to discover the nest, for the bird can never be seen on it. The Grebe slides off her eggs like an eel, or as an otter takes to the water, leaving neither bubble nor ripple behind. It also covers the eggs with aquatic weeds, so that looking down on it from the bow of a boat no uninitiated eye could detect any eggs, or see more than a piece of drifted wreck-weed. The young are marked with sooty spots and covered with down, their necks curiously striped. The old bird brings them their food, consisting of tiny fry and tadpoles. When the young Grebes begin to catch fish for themselves, they may be found floating dead in the reeds, choked by trying to swallow roach too large for the gullet.

I have seen from twelve to fifteen Great Crested Grebes together on the large Swiss lakes. This was a novel sight to one accustomed to see them solitary, or at most in pairs. The shooters there follow one Grebe at a time, singling it out from the rest, and eventually hunt it down when exhausted. They calculate on at least a half-hour's work ere procuring one. On the bird rising they instantly fire, so forcing the bird to dive, though, perhaps, far out of reasonable range, maintaining that the less the bird is allowed to remain above water to breathe the sooner does it give in.

It may be noted that Grebes shot during winter, excepting the Eared Grebe and the Little Dipper or Dabchick, are grey and colourless. Looking at an adult male Great Crested or a Slavonian Grebe, in summer plumage, you will scarcely recognize

them, the change is so great. These two species I have now and then obtained in full summer dress, with their quaint grenadier-looking heads completely and beautifully furnished.

Like the three large Divers, the Grebes, I believe, always build their nests on the verge of marshes and lakes, or amongst aquatic herbage at a distance from the shore, and never in such a position that they cannot in case of danger at once shuffle or dive straight into the water. What nests I have found (namely, those of the Great Crested, and the Dabchick) have invariably been more in the water than on the land—in fact, almost afloat. It is the nature of these birds to seek for breeding haunts quiet, lonely waters, as free from wind and wave as possible.

Mr. R. Evatt, before alluded to as a close observer of the wild birds of his district at Mount Louise, says:—"The Great Crested Grebe nests on my lake. It breeds scantily on most of the large lakes of this county (Monaghan) as well as on those of Ulster, but, being very shy, they are not known to be as plentiful in the summer as they really are. On being disturbed they will swim with nothing but the head and neck above water, and in such a manner that one would scarce detect it to be a bird. They also hide in the reeds the moment a pursuit is attempted."

THE RED-NECKED GREBE (*Podiceps rubricollis*) is by far the rarest of all. THE SCLAVONIAN GREBE (*Podiceps cornutus*) is also rare in Ireland, and the EARED GREBE still more so.

THE LITTLE GREBE, or Dabchick (*P. minor*), fre-

quents during summer every rushy pool, every lake, large and small, throughout the country, and in the winter all the harbours and tidal waters as well. A merry little sprite he is, fluttering along the surface when put up, or diving ceaselessly all the day. His feet are larger for his size than are those of any other Diver, and appear to weigh the bird down when flying, as he drags them dip, dipping along the water behind him. These little fellows dive instantly on alighting when alarmed, not giving so much as a glance round first; and on reappearing after a dive, will spring on the wing without resting one second on the surface. Away they dart, hurrying along for many yards, then suddenly stop and vanish underneath. I have often found their nests, but always with great difficulty. When leaving it for a bathe, for food or drink, they will cover the eggs with water-plants and weeds, or pluck the sides of the nest over the centre. The nest then looks like a little lump of moss or slime, and sometimes drifts to and fro with the wind. They will also, it is said, dive away with the chicks under the wing till danger is passed.* I once shot a Great Crested Grebe flying, when two young ones dropped from the bird into the water. I could scarce credit any bird being able to sustain its flight and at the same time grip an object *under* the wing. I feel sure that, when such an incident occurs, it is on the back, and not under the wing, that the young are placed. As in the case of the Shelduck before

* This has been proved in the case of the Slavonian Grebe. See "The Ornithology of Shakespeare," by J. E. Harting, pp. 204, 205.

mentioned, the tiny brood, after gathering a little strength, are able to retain their position by tightly grasping the mother's plumage. When the wings are fully extended (without doing which a bird could not fly, however slow), there cannot then be any hollow for a chick to nestle in ; nor could the parent grasp its little one save with partly folded wing. This latter action would be that of the Dabchick when diving, as some affirm she does, with her eggs from the nest ; but she surely could not fly with them. I refer to this because it is a common idea in Ireland that a bird can fly with its young under the wing.

CHAPTER VIII.

Geese—The Bean Goose—The White-fronted Goose—The Greylag—
Brent and Bernicle—The Pink-footed Canada and Egyptian
Geese—The Snow Goose.

WILD-GEESE, of which five species may be encountered by the fowler in Ireland, may be dealt with separately, since their habits are so different.

In severe frost, Geese are less local in their haunts. In such weather they are found straggling to places where they were before almost unknown. Even the Brent, exclusively a coast species, I have seen far up a tidal river close to a town.

The Bean and Brent Geese are easily tamed. A slightly wounded bird is well worth bringing home as a pet. I have kept and seen several, and whatever it may be, whether dog, bird, or even child, the captive will always evince an affection in some way or another. A friend of mine owned a tamed Brent and a fox, that were the best of friends, and slept in the same kennel!

Geese, like Swans, are slow in taking wing, either from land or water, and give more or less notice of their intentions previous to flying. They stretch the neck, cackle loudly, run along the ground, ere they can rise; and beat the surface with their wings if on the water.

They always appear to have a sentry on duty.

an outside bird, who, whilst his companions are greedily feeding, stands erect, looking suspiciously round on all sides. When near enough to hear, I have remarked that the watching goose continually utters a low guttural chuckle, which seems to imply, "All's well," "All's well." On suspecting danger, or noticing an unusual movement in the vicinity, he is instantly silent. This cessation of sound on his part is at once followed by the startled attention of all the rest. Such facts are well known to fowlers, more especially those who wait and watch by the hour to obtain a shot, and who are often close enough to observe such habits and peculiarities, whilst lying in anxious concealment themselves. These men aver that should the watching goose feed or sleep, he is liable to be summarily chastised by the others, who apparently know their safety, when feeding or resting, depends on the culprit's vigilance. Geese can communicate alarm in a quiet way as well as in a noisy one. A couple of winters ago I was lying in a deep channel at low tide. There was a large gaggle of several hundred Brent, feeding some distance off. One of them wandered from his companions a long way in search, I suppose, of daintier food. He suddenly popped his head over the bank, within a dozen yards of where I lay motionless in my punt, awaiting the rising tide that would bring me within shot. The Goose stared, I stared. "Brenta" will soon spring up, I thought, and spoil my chance of a shot with my swivel gun. Not so, he merely stalked slowly back to his friends, and on reaching them sprang up and led them off seaward.

I can testify that on several occasions I have seen the sentinel relieved of his duties by a companion. He, I presume, has then but one idea, namely, how best to make up lost time. It may be noted that geese are not very wary at night, and do not then appear to possess the visionary powers of other wildfowl. It is a custom, in parts of Ireland, to bring home a wounded goose, which is, when somewhat tamed, pegged down in a suitable spot, to attract others; the punter retiring to a safe distance and waiting for the chance of a wandering gaggle alighting near his decoy. He then approaches with the flowing tide, having previously made sure that his tame bird is placed on the mud which will be last covered, and, therefore, the most favourable spot to float up to.*

The shore shooter acts similarly, but digs a deep hole almost within shot of his prisoner, and thus hiding, takes his chance. No minute of the day is so good for a shot as when the geese are floated off the ooze at dusk.

I have more than once obtained a fair shot in the manner described above, and always noticed that when wild birds came to my decoy, they invariably pitched some distance away from it. If unsuspecting, they solemnly stalk up to the captive, who, being tame and hungry, after a good stare, continues feeding placidly on a liberal supply of grain laid near. The wild gaggle then surround the stranger, and hold an animated dispute over such a curious incident. They next retire some paces, and, after further questioning and talking, begin to feed; uneasily at first, as if something

was wrong, they knew not what. I never yet saw them associate on such occasions with a decoy bird.

One of the best shots I ever made at geese happened in this wise. My decoy bird having twisted his fastening round both legs, lay helpless, feet in the air, and head turning from side to side. I was in the act of starting to his assistance, that I might set him upright, when a large gaggle of Bean Geese winged slowly over the spot, hesitated, turned, wheeled, and finally alighted some hundred yards from my prostrate captive. After long conference, they rose, as I thought, to depart—startled, though at first interested, in seeing one of their species in such a plight. They, however, pitched again, and crowded round the decoy, cackling vociferously, and without more ado beat and pecked their relation to death. They then walked off a few yards, regarded the corpse fixedly for some moments, and calmly sought food and repose. Whilst this tragedy was being enacted, my punt was stealing nearer and nearer, until eventually the slaughter of the decoy bird was avenged, and twenty-eight of the visitors were laid low.

By far the commonest wild-goose of Ireland is THE BEAN GOOSE (*Anser segetum*), which is to be seen in enormous gaggles for six months of every year. It is essentially an inland feeder, on bogs and meadows; but will fly to the mud-banks and slob of the tide at dusk, to pass the night. These geese frequent every bog and marsh in Ireland which afford food and security from molestation. They are always found inland in large numbers, save in frost, when they fly down to the meadows and soft green reclaimed

lands that lie near the tide. A small proportion will, in the mildest weather, frequent the mud-banks to feed and rest. They usually quit their inland haunts at dusk; disliking to remain on land by night, where dogs, men, or cattle, may disturb them, and accordingly fly to the estuaries to rest and feed. At first dawn they again wing inland, and pass the day in open, unapproachable ground. They are very abundant in Tipperary, Limerick, Cork, and the midland counties, where they find their food to perfection. On several occasions I have found Bean Geese so starved as to allow a capture by hand, and quite unable to accompany their fellows to the tide, when hard frost has caused them to desert their usual pastures. In the hard winter of 1814, a curious accident occurred on Lough Derg, Upper Shannon, as recorded in an old diary in my possession. A great gaggle of Bean Geese were seen to alight near its upper end on the ice, and so remained for the whole day. In the evening a shepherd walked across the frozen surface to an island, dragging with him fodder for the sheep upon it. Crossing over the spot on which the wild-geese had been resting, he fell through and was drowned, the heat of their bodies against the ice having so melted and thinned it, that it was unable to bear the weight of the man and his load.

The Bean Goose is furnished with a most suitable bill for grazing, and can cut off wet soft grass or young shoots as with a sharp pair of scissors. The Bernicle and Brent being nearly always (the latter entirely) marine feeders, do not require this power of cutting to the same extent, for they live on

weeds and grass, which they tear up by the roots. Bean Geese are the slaves of weather ; scarce a wind can blow that does not in some respect affect their movements. When frost sets in, they are driven for sustenance to the tide. A south-west breeze, an unsheltered one in most places, will drive them off the bays and harbours. They much dislike wet, boisterous weather, and during its continuance remain in their mountain haunts. A north wind unsettles them ; a north-east wind, again, will bring them to the coast, in anticipation of frost ; a change, and they are on their travels once more. Frost, if continued, tames and starves them, till they are refused in the market, and not worth powder and shot. At such times, I have known shore-shooters kill from twelve to thirty in a day, as the birds flew restlessly hither and thither in search of food, or unfrozen pools in which to wash and drink.

THE WHITE-FRONTED GOOSE (*Anser albifrons*) is a regular winter visitant to the south of Ireland, and not uncommon in severe weather. It may then be seen in gaggles of from a dozen to fifty. During the winter of 1879-80 a gaggle of twenty-three White-fronted Geese, and another of fifty, were counted by Mr. Percy Smith at Headborough, co. Waterford. They were numerous about the open fields in the frost of January 1881, and many were shot in Cork, Kerry, Limerick, Waterford, and Wexford, as well as north of the Shannon. Instances of their capture in the extreme north and north-west of Ireland (where they are always abundant) are too common to record. In January, 1881—the best month for rare wildfowl that ever occurred, to my

knowledge, in Ireland—Mr. W. Bagwell shot four (out of about thirty) White-fronted Geese on the private lake at Marlfield, co. Tipperary. The same month many large gaggles were seen near Templemore and Broughall (Capt. Dugmore). Though a common species in the north of Ireland, they are very rarely seen in such numbers in the south as herein noted.

Like the Bean Goose, the "White-fronted" is an inland feeding bird. In January, 1881, in unexampled bitter weather, nine of these geese pitched and ravenously fed on some refuse vegetables in the main street of Tullamore, King's County. It being Court-day, many persons observed them. My informant knew their species well, describing the barred breast and the white mark round the base of the bill, like that on the head of a female Scaup. The White-fronted Goose, though frequently met with in Ireland, is, as stated, much oftener seen in the north than in the south. Mr. Robert Warren, of Ballina, co. Mayo, one of the best naturalists and fowlers in Ireland, tells me, that of country-feeding Geese in the north of Ireland, he considers the White-fronted the commonest, and the Greylag the rarest. All my informants, who know the inland districts of the north and west of Ireland, agree that this goose is very common; the Bean fairly numerous, and the Greylag the most rare. Would that the two pursuits of shooting and Natural History were oftener combined; for who has such rare opportunities of studying habits and species as the fowler? The very fact of such a man's success being attendant on his overreaching these wild birds when least sus-

pecting, proves what chances of observation are his.

Geese, though cunning by day and watchful to a degree, are wont to be taken in the simplest of traps, notably by pitfalls dug in the large open meadows, which the birds in winter daily frequent. These are in constant use by the peasantry in parts of Ireland, though only Bean Geese are caught in them. The birds, by reason of the wide space on all sides, feel secure from sudden attack, and after some reconnoitring for hidden danger, at first timidly, and afterwards freely, partake of the tempting grain laid round and at the bottom of each hole. Success lies in forming a pit just deep enough for a goose to reach and barely touch the bait and no more. The pit must be cut very neatly with smooth sides, and in shape somewhat like a flower-pot, narrowing to the bottom. A man in co. Monaghan was such an adept at this method of taking wild-geese, that he has been known to capture a dozen in a day. Perhaps the bird may shuffle the enticing seed with its bill, sufficient to whet the appetite, and yet be unable to partake of it. At such times the feet are on the extreme edge, the neck strained its utmost ; an inch further and a royal feast will be his. One more effort, and he is a lost bird—one forward slide, one anxious struggle, and his balance is gone beyond recovery. He has no room to expand the wings, his feet cannot regain the edge. In this ignominious attitude, tail uppermost, he falls an exhausted and easy prey to the fowler on his rounds. Traps and snares on land are never successful with geese ; one bird caught in view of

his companions, by his struggles and cries, tells a warning not easily forgotten by his relations, who at once quit the spot for a long period. In pitfalls, as described, the birds are so quietly taken that I have seen the gaggle busily feeding round the captive, who, with but tail in view, is well nigh motionless from the moment he is overbalanced.

Geese are not as a rule seen in large gaggles till the beginning of November. They remain till the middle of April, Bean and Brent Geese often remaining till even the 1st or so of May ; but a favourable wind will sweep them away earlier than wont, especially if it occurs with a bright moon. On the other hand, if adverse gales prevail, their departure is delayed.

On the 15th April, 1881, I saw upwards of two thousand Brent Geese in a bay off the Kerry coast ; their presence, by Act of Parliament, being of no service to the local fowlers. These poor men, though at times starving for want of a shilling, view a source of profit, the gift of Providence, before their eyes from day to day. There can be no object in protecting Brent Geese, for they never nest in the British Islands.

The heaviest shot at geese I ever knew of personally was made by Grimes, the Limerick fowler, who obtained *forty-three* of the Bean species at one shot, on the ooze at the mouth of the River Maigue, co. Limerick. This was in January 1880. His gun carries two and a quarter pounds of shot, and a half-pound of powder. One of the next best I am aware of was made by Mr. Graves, one of the keenest fowlers that ever lived, and who, about the

year 1865, killed *forty* Brent, the first shot from a new gun, in Tralee Bay.

The dimensions of this gun—I know it well—are, length of barrel, 12 feet; weight, 300 lbs.; charge, three-quarters of a pound of powder, and $3\frac{3}{4}$ lbs. of shot. This gentleman also used a very fine double-barrelled punt gun, which eventually burst, blowing away the sides of the punt, and nearly sending its owner to the bottom. The first of these guns described is far the largest ever made, to my knowledge, for wildfowl shooting—far too large, in fact, to be of service.

Colonel Hawker's well-known double gun carried $2\frac{1}{2}$ lbs. of shot. Colonel Hawker told Mr. Birch Reynardson (who now possesses it) that it cost him £250 to build, and Mr. Reynardson justly considers it the finest piece of wildfowl artillery in the world.

THE GREYLAG GOOSE (*Anser ferus*), the ancestor of our domestic species, is a rare species in Ireland. I have seen but few in a season, and seldom on the coast. The only records I have of their capture (and they are not many) are nearly all from inland localities. Several Greylag were shot on the Old Head of Kinsale in the winter of 1880-81. One was killed in December 1878 by the lighthouse keeper. A couple have been obtained in Lord Sligo's demesne at Westport, and they are seen every year in the wild district of Louisburgh, but inland (Lord J. Brown). Mr. Nelligan has a couple that were shot in co. Kerry (date unknown). Two were shot on Achill Island by Mr. Pike, winter 1880-81. Three, shot in co. Tipperary, were exposed for sale with some Bean Geese in a dealer's

shop in Limerick, 1880-81. I have notes of about a dozen in 1878-79-80-81, from Tipperary, Wicklow, Louth, Meath, King's and Queen's Counties. At Castle Coole (Lord Belmore's), co. Monaghan, there are now over a hundred Greylag Geese on the lake in the demesne. They never stray far, and no one knows how many years they have bred and existed on this water. They are the true Greylag, and exactly correspond in measurement and plumage with the wild species. There are, however, in Ireland, to my knowledge, a couple of gaggles of Greylag that visit every season certain localities in numbers. Notably on a lake close to the sea, at the Murrough of Wicklow, where Mr. A. G. More, of Dublin, told me he had seen a hundred together, and that they remain through the summer. Were they in detached parties, they might be suspected of nesting, but they are always herded. They may often be seen resting by day on the grassy meadows close to the high road. The Greylag is easily distinguishable by its size, and, when closely examined, bears a great similarity to the domestic bird, a resemblance which, as in the case of wild and tame duck, is sometimes very exact. In descendants of wild species, the feet and legs are the chief points of difference. No domesticated fowl can run as can a wild one, any more than it can equal the latter in flight.

Greylags are well known to inland shooters ; their bulk detects them, and they are sometimes alluded to as Swan Geese, but are spoken of as rare, and seldom shot. Fifteen grey geese, described as being large as tame geese, were seen by a keeper near Queenstown. They appeared in January 1881,

and remained in that locality during the frost. My informant knows the Bean Goose well, and stated that these were much bigger and taller birds. Others who saw them remarked on their unusual size and light plumage.

When birds that are local inland are driven to the coast by severe weather, they gather in small parties and shift their quarters in company. They then fly low over the land and rest on the way. If migrating, they act differently. When sailing out of sight of shore, in the spring or autumn, I have seen geese and swans flying at such a height, that the two species could not be told apart without a powerful glass. Were ducks to fly so high (perhaps they do) when on passage, they could not be seen. It is only on dark nights, and especially wet hazy ones, that birds when migrating descend and drop on shore, or come in contact with the glass of the lighthouses.

THE BRENT GOOSE (*Anser bernicla*) is the smallest of its tribe, and presents a black and grey appearance both on land and water. In many parts of Ireland, and notably at Tralee, Wexford, Belfast, and the northern marine loughs, it is misnamed the Bernicle; in other localities the true Bernicle (*Anser leucopsis*) is called the "Land Bernicle," and the Brent the "Sea Bernicle." Owing to this confusion they cannot, from report, be with certainty identified. The Brent Goose feeds entirely on the sea-grass, or *Zostera maritima*. The other lives on the short wet herbage which abounds in tidal marshes, on reclaimed land, bogs and sand flats, and is oftenest found within sight of the tide. This species, according to Mr. Ussher,

of Cappagh, was not uncommon some years ago at the mouth of Waterford Harbour, and frequent at the back of Tramore Strand, before it was enclosed. Brent are very numerous on the Irish coast, especially in the north, north-west, east, and south-west; their southern limit on the western coast being Tralee; north of that place, their next haunt is Mutton, and Hare Island, in Galway Bay. They are very rarely to be found between Tralee and Wexford in the south; but from the latter place, all round the east, north-east, north, and north-west coasts, back again to Tralee, I have seen them in plenty.

Mr. Law, of Youghal, shot several Brent Geese near that place during the winter 1878-79. These birds are numerous in Lough Foyle, Dundalk Bay, Lough Swilly, Drumcliff Bay, Sligo Bay; rather plentiful in Belfast Lough, Carlingford Lough, at Wexford; and they abound in Tralee Bay. I never saw Brent on the Shannon, or on the estuaries of Bantry or Kenmare. Near Malahide, Brown, a local and most observant fowler, describes them in some seasons as darkening the sky, in others as scarce; but in most places frequented by Brent, their numbers do not appear to vary to such an extent, nor does frost affect their appearance. In Broadhaven Bay, near Belmullet, Brent are common. I never saw Brent and Bernicle together, or their feeding haunts interchanged, although I have seen both species in Donegal, within a few hundred yards of each other, each feeding to its fancy, but never mixing. This has, as above stated, given rise to the name of "land" and "sea" Bernicle. When near

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enough for observation, the peculiar coughing grunt of the true Bernicle, as well as the white patch near the eye, and larger size, at once distinguishes the species. Brent remain on the coast till the end of April, but if a favourable gale set in, they will sweep away earlier. In very hard weather, when their food freezes between the tides, Brent become tame and starved, as do all other geese in time of severe frost. I have more than once seen a wounded Brent heading out to sea against the wind overtaken by a Great Black-backed Gull. The latter would pass the goose some fifty yards, then face about and come full tilt down wind against the slow-flying bird, sending it like a stone to the water, and if not killed outright, so disabled as to fall an easy prey. Sir R. Gore Booth tells me he has found Brent very abundant on both sides of Novaia Zembla in June, July, and August.

The following letter from Sir Frederic Hughes, of Wexford, an experienced wildfowler, touching past and present visits of the Brent Geese to Wexford Harbour, is so interesting that no apology seems needed for quoting it. Writing on November 14, 1881, he says :—"The small goose that used to frequent this harbour and coast in such prodigious numbers, and even still shows abundantly during most winters, is the Brent. During the forty years which I have been shooting on this part of the coast, I have never met with the Bernicle Goose. Some years ago, both birds might have been seen feeding together in captivity, in St. James's Park, and they have a few there still. The Brent Goose is remarkable for a white ring round the neck, which

becomes perfect the second year of its age. It is said to be the smallest of all geese, but one severe winter, about thirty years ago, we were visited by a large number of a smaller bird, much blacker than the usual Brent, and having the ring imperfectly formed. They were *very lame*, and many were

THE BRENT (1) AND BERNICLE (2).

killed during their stay. Could these have been merely young birds, or is it possible there is a smaller species of Brent? The best shot I ever made at Brent Geese was $23\frac{1}{2}$ couple, 47 birds bagged, besides all that got away in the rough water, half a gale of wind blowing at the time. This shot is

known to all punters on this coast up to this day as 'the great shot.' It occurred by night. The best shot I ever made at these birds, by day, was $12\frac{1}{2}$ couple, but I have often killed 25 to 30 couple of Wigeon at a discharge of my largest gun, carrying two pounds of shot."

Brent are not commonly regarded as geese in Ireland. If inquiries be made whether wild-geese visit any particular place, Wexford, for example, the answer will be, "Not often, only Wigeon, Divers, and Bernicle (*i.e.* Brent) are shot by the fowlers here."

Absurd to narrate, the old story of Brent Geese being hatched from barnacles on drift timber is universally current on the coast of Ireland to this day. Nothing will dissuade the fishermen and fowlers; they will vow they have seen the occurrence themselves; or that their friends have. Though these folk rightly declare Brent to be the geese so supposed to be brought out, the well-known story speaks of Bernicle, though wrongly called so, as the Brent is of course intended.

THE BERNICLE GOOSE (*Anser leucopsis*), like the Brent, is very local in its distribution, and on some parts of the coast it is known as the "White-fronted Bernicle," to distinguish it from the black-headed and darker-breasted Brent. It is almost a rare species in Ireland, seldom seen in the south, but more common to the north and north-west and east.

Bernicle have once or twice been shot off the Waterford coast, and I obtained three near Kilcredan lighthouse, co. Clare, in January 1881. They are most unusual visitants to the south-west of

Ireland. Mr. Nelligan, of Tralee, has two in his collection, killed in the bay, but they are very rare on the Kerry coast. Sir H. Gore-Booth tells me that a gaggle of Bernicle frequent his grazing fields from November 1, the day the cattle are removed. As many as sixteen have been killed by the double discharge of an eight-bore gun by Sir Henry, who knows the species well, and tells me he has seen them breeding in Spitzbergen in August.

Bernicle are found in the north and north-west of Mayo, particularly in the barony of Erris, an immense tract of bog, marsh, and mountain, thinly populated, bordering on the ocean. They are not, however, nearly so numerous as the Bean Goose, and are comparatively rare in the south of that county.

Mr. Pike, of Achill, told me that large gaggles of the true Bernicle visited his island home; few Brent, and now and then Greylag, in very limited numbers. Bernicle are somewhat rare in Donegal, and almost unknown in Belfast Bay.

Mr. J. Walsh, of Arranmore, co. Donegal, told me that the true Bernicle visits the island in numbers from October 1 to April 15. They leave as they come, in large gaggles, and then point northward. When they first arrive they are very shy, and frequent the highest parts of the island, thus showing they are not the Brent, so often called Bernicle by the coastmen. These were also described as having the white face peculiar to the Bernicle. One gunner killed forty in a day during the winter of 1880-81, and with a shoulder-piece. Such a winter for taming wildfowl was never known.

This goose is not uncommon about Carney Strand and Striedah Strand, some ten miles from Sligo ; also near Oyster Island and Strandhill in that district. On the east coast they are to be seen at Dundalk Strand and Lurgan Green, a place alluded to by Thompson in his "Natural History of Ireland," as a favourite haunt for these geese forty years ago ; it is yet one of the few localities which they still visit in large numbers. The steward over the Marsh Farm at Lurgan Green (the property of Lord Clermont), who is described by his employer as being a man most intelligent in such matters, in reply to queries kindly instituted for me by Mr. Patterson, writes, "Yes, Bernicle come every winter, about the 10th of October, and leave the middle of April. They are fairly numerous ; from 100 to 500 may sometimes be seen together ; they are not much disturbed or shot at, and they have never been known to remain the summer. On one occasion last winter (1880-81), I saw a large gaggle of more than 500 Bernicle on the banks of the floodgates, sitting in the shelter on a stormy evening. They had white breasts and cheeks as you describe." Lord Clermont adds, that his steward well knows the difference between the Brent and Bernicle. The latter, it appears, have come in greater numbers of late, than in the earlier years of the present embankment, which forms the seaward boundary of the Marsh Farm. During high tide they feed a short distance inland on grass, and fly to the strand, where they eat the weed that grows on it, at low water.

Mr. Sheridan, who is well acquainted with the

birds frequenting Achill, informs me that the true Bernicle visits the island in large gaggles, and in this respect he confirms the account of Mr. Pike. They come in November and leave about the end of March or beginning of April, and roost on an island close to the village of Keel.

Bernicle seldom, if ever, fly far inland at high water, or to seek food, but usually remain within sight of the tide. They are almost as sea-frequenting a species as the Brent. The latter, however, *never* come inland, but rest in the open when their food is under water, and will there sleep or feed on drifting weed.

Though so much confusion exists in Ireland between Bernicle and Brent, in some districts they are correctly designated. In Achill and western Mayo they are well known; but then Brent in Achill are uncommon, and only occur in limited numbers. In Achill the true Bernicle visits Keel Lake in gaggles of from 100 to 200, and they are fond of resting on the green flat surface of Keel Island, some two miles off the shore. They also frequ
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line, Brent alone visiting the Moy Channel and its banks.

PINKFOOTED, CANADA (the handsomest of all the tribe) and EGYPTIAN GEESE, I have seen now and then, but never really as wild birds, and always to be suspected as deserters from ornamental waters. Of the SPUR-WINGED and RED-BREASTED GEESE I have no notes.

A much rarer visitor, however, than any of these has been detected on two occasions in Ireland.

THE LESSER SNOW GOOSE (*Anser albatus*) was first noticed at Wexford Harbour, where, in November, 1871, three were shot, two of which were fortunately preserved, as recorded by Mr. Howard Saunders (Proc. Zool. Soc., 1872, p. 519). Towards the end of October, 1877, seven birds of this species visited some marshy ground at Termoncarra, in the barony of Erris. One of these was shot by Mr. J. R. Crampton, of Lake View, Belmullet, and another, a gander, trapped. After a time the latter was placed with some tame geese, and soon fraternized with them, eventually pairing with a domestic goose which brought up a hybrid brood. The particulars of this very interesting occurrence have been fully detailed in an article by Mr. Harting in *The Zoologist* for 1878, pp. 419-422, 453, with some additional particulars in *The Zoologist* for 1881, p. 308.

The plumage of this Snow Goose, as its name implies, is *pure white*, the tips of the wings *black*, like those of the Gannet.

CHAPTER IX.

Swans—The Hooper—Bewick's Swan—The Polish and Mute Swans.

WILD SWANS (*Cygnus ferus* and *minor*) are the easiest of fowl to obtain if once within a fair distance. They are very slow in taking wing, and give ample notice of their intention to quit. This they do by heading up against the wind ; or, when calm, by clustering together as if in consultation, and loth to leave. Even when their minds seem made up, and a start is determined on, they beat along the water fully fifty yards ere their wings are clear, and a full stroke obtainable.

Unless exceptional circumstances arise, the fowler should push on his best until he sees them almost off the surface ; at this moment their necks and wings are more favourably extended than when swimming. If, however, he should chance to meet with but two or three within shot and together, it is wiser to take them at once, for, of course, a few are more likely to open out on rising than a good-sized herd. If a solitary bird, or only a small number, be encountered, it should be well ascertained that they are not wanderers from a neighbour's private lake. If so, they are easily distinguished by their size and the black knob at the base of the bill, the extremity of which is yellow. In wild swans these colours are exactly reversed, the base of the bill being yellow

and the extremity black. If you happen to get a herd of swans, or even one, to leeward, in a corner, or surrounded by land, especially high land, you may take your time ; the chances are they will pass within easy shot. A swan cannot rise save facing the wind ; or surmount a wood or low hill, without two or three gradually ascending circles. On such occasions you may get a charge into them with the large gun, and bring down a couple more with the cripple stoppers. Except as presents, however, or trophies for a hall or museum, swans are scarcely worth following ; though, if so inclined, you can cut pipe-stems and pens from their quills, and stuff a quilt with the down to cover you on winter nights.

Wild swans in Ireland are so numerous that notes regarding their capture are hardly necessary ; though some account of their habits and haunts may be of interest. They may be seen in most winters round the Irish coast in herds of from five to twenty, and now and then fifty to one hundred ; but this is seldom the case. I have counted as many as two hundred together, and the noise they made on rising, caused by the wings beating smartly against the water, was most curious, resembling the snapping of a number of strong sticks.

In Belfast Lough, swans are rarely seen. In the county of Sligo they are occasional ; three Hoopers were shot by Sir H. Gore Booth, at Lissadell, in December, 1875. Two hundred swans, presumably Bewick's, visited the Malahide River, near Dublin, during severe frost and N.E. winds, in 1867, remaining but one week. They are regular visitants to this place, but as there is no sale for

them, and there is a prejudice against killing them, they are not followed by the fowlers. Hoopers are now and then seen and shot on Lough Fern and Glen Lough, near Mulroy Bay, county Donegal; and Bewick's Swan has been killed in the estuary of the Moy, at Ballina. A Hooper was shot at Ahanesk, Cork Harbour, by Mr. Jackson, January 28, 1879. Another was killed near Kinsale, December, 1881; two I shot in Cork Harbour, in January, 1879; all being obtained in the same county. I have also notes of eleven Hoopers shot in the south of Ireland in the severe January of 1881.

Mr. Llewellyn Dillwyn's head keeper (F. Kearns) says that for the last three hard winters he has observed wild swans passing over in numbers to settle upon a lake near Bangor, twenty miles to the west of Mr. Dillwyn's shooting in co. Mayo; and on the first break-up of the frost he has seen them return eastward again. Only once, in the winter of 1878-79, did they alight in his neighbourhood, and then only five stayed for a few days. One shot with a bullet weighed 21 lbs., evidently a Hooper.

Mr. Warren writes that on the 17th December, 1880, a large herd, of from two hundred to two hundred and fifty swans, was seen on Lough Cullen, near Foxford, county Mayo, by Captain Kirkwood, of Bartragh. Swans visit Ireland in great numbers during frost, and even in the mildest winters appear in certain localities.

The only way to bring down a swan with the shoulder-gun is by aiming at the head; bearing in mind the pace they fly at is deceptive, and far faster than may be supposed. The immense, slowly-

moving wings often lead the shooter into a miscalculation of aim. A swan skims down wind as fast as a duck, but its huge bulk prevents its speed being realized. Be careful not to drag a wounded swan into a boat; he will thrash away in great style, and give much trouble. Old yarns have it that a blow from a swan's wing can break a leg or arm. This is utterly erroneous; for though the large quills have the strength and elasticity of steel, the

SWANS—HOOPER, BEWICK'S, MUTE, AND POLISH.

bones of a swan's wing are too yielding and flexible to harm man or dog. A lash as from a switch may be possible, but the dangerous stroke of a cudgel never. Their cry is clear and resonant, especially that of Bewick's Swan, which resembles a note of music, or twang of fiddlestrings.

There are but two wild species to be met with in Ireland, the Hooper and Bewick's Swan. A rarer species, that has very seldom been obtained, is the

Polish Swan, which differs from the rest in being white from the nest to maturity, the young of other species being grey the first two years, and then known as cygnets. Wild swans sit like geese, and never appear so ornamental as tame ones. They lack the graceful curving neck, so pleasing to the eye in the Mute species ; and which in the wild bird is borne aloft stiff and straight.

Many fowlers look upon the tame swan and the farmyard goose as equally domesticated, not aware that the former is essentially a wild bird ; tamed it is true, but in shape and habit exactly similar to those of the same species in the particular country where it is found. Wild swans have often, to my knowledge, decoyed tamed birds away from ponds never to return. I doubt not, from long sluggishness and lazy feeding, the wing-power of the domesticated species is much impaired. Now and then Mute Swans drop exhausted on the coast, having so far followed their betrayers as to become an easy prey to the local fowlers who may care to shoot them. I have several notes of such fatalities. On other occasions they have been noticed flying seaward with their wild companions, to meet an unknown fate.

The Hooper, or Great Swan, I consider far rarer in Ireland than Bewick's. Out of many scores seen and shot, I have found but a small proportion of the former. I have seldom met with a dozen Hoopers together ; this being a small number for the other species. Thirty to fifty Bewick's in a herd are not uncommon on the estuaries and lakes near the coast. Mr. Pike, of Achill, told me that

in the winter of 1879-80, a herd of one hundred and ten Bewick's Swans visited his lake. Last season (1880-81), fifty-six was the largest number counted at one time. Mr. Pike never allowed the swans to be molested, and could, he said, at all times approach them within less than two hundred yards. In Achill, Bewick's Swan arrives every winter on the lakes, the first week of December; but, as everywhere else, their number is greatly influenced by weather. If a hard frost set in at the end of January, swans will even then appear in plenty. On Lough Gill, a small freshwater lake in Kerry, divided by a narrow strand from the Atlantic, three to four hundred swans remained during the frost of 1878-79, and were seen by many gentlemen, amongst others by Lord Ventry, who described to me their beautiful appearance and numbers, but did not know their species.

The lake of Castle Gregory is separated from Brandon Bay, coast of Kerry, by a narrow sand-bank. The water of the lake is only three to four feet in depth, and the bottom of it abounding in weed, it is convenient feeding for these birds.

The old historians of Kerry invariably allude to this piece of water as holding "a great store" of swans. It is private property, and is strictly preserved by the owner, Lord Ventry. It is curious to note that multitudes of wild swans have been for generations in the habit of yearly visiting this small lake that lies so far to the west on the seaboard of the Atlantic. There were about eight hundred swans here during the unexampled frost of January 1881. When a shot was fired

they rose on wing together, as one grand white cloud, and left for the sea, but always returned ere nightfall.

Besides the eight hundred on Castle Gregory lake in the winter 1880-81, there were several smaller herds on the mountain lakes in the neighbourhood. Even in mild seasons three to four hundred swans is not an unusual sight here; and the keeper (William Thompson, now with Lord Penrhyn) reported that he once counted quite two thousand on this lake.

In the winter of 1864-65 a large herd of about nine hundred appeared on the Shannon, and at the same time a number of smaller ones, consisting of some two hundred others. A full account of them was given at the time by the late F. J. Foot, in the "Proceedings of the Dublin Natural History Society," vol. iv. p. 109.

Nine Hoopers frequented the mud-banks of the Ilen River, Skibbereen, co. Cork, during the hard frost of January 1881 (Captain Morgan of "Bunalun"). In the county Mayo swans are found in winter on the lagoons and lakes near the sea, in the wild mountainous and bog districts, but are never numerous, and few are shot.

There is a very general feeling in Ireland against slaying a swan. The superstition is that something dreadful will sooner or later overtake the man who kills one. In some counties, notably in the west, the *poor* fowler could not for a purse of gold be induced to fire at a swan. They hold the strangely quaint idea that a departed spirit, perhaps of one of their own kin, is imprisoned in the outward form of

each bird. If a shooter injure himself as a patriarch, it is freely implied that such misfortune is the inevitable punishment of a swan murder (perhaps forty or fifty years before) when he was young and thoughtless ; such never-forgotten act being alluded to as the cause of harm, and handed down as evidence, more especially if the accident was from a gunshot wound.

From ten to twenty swans might often be obtained at a shot by the punter in Ireland in hard winters, but deference is wisely paid to the prejudices of the people—always a diplomatic course to pursue.

The cry of a Hooper is like the first part of its name pronounced twice, and then a pause—"Hoop, Hoop—Hoop, Hoop." That of Bewick's is most musical, and sounds like the word "tong" quickly uttered. The bill and head of Bewick's is blunt and short in comparison with that of the larger kind, which is longer and finer, and the yellow patch on either side comes nearer the tip than it does in the latter species. I never saw the two species intermix. It is more usual to find Hoopers inland on shallow lakes than on the coast, and they are by no means willing to leave comfortable quarters till their period of migration.

Bewick's Swans are fond of the tidal waters, and the lakes near the sea, but will leave, voyaging eastward, with the advent of mild weather. Though swans act thus, most wildfowl merely journey further south in times of frost, and there remain till their period of migration. The birds of the north of Scotland will visit the south of England and Ireland as a change for the better during a rigorous winter ;

and birds habitual to the south, such as Teal and Golden Plover, will betake themselves to France and Spain, not to return.

THE POLISH SWAN (*Cygnus immutabilis*) in Ireland is very rare, or I would rather say seldom shot; for out of the vast number of swans that visit that country in severe winters, it may be presumed the so-called Polish bird is not unfrequent. A Polish Swan was shot at Kinsale, January 1881, and preserved by Rohu, of Cork. I killed one out of two on the coast of Kerry the same month and year. Though many swans were about, both Hoopers and Bewick's, this pair were always alone, as were the other species. The one I shot was an old male without any knob, snow-white, and with slate-coloured legs and feet.

Here is an anecdote connected with this bird. A gunner who had been specially taught, by reason of previous mistakes, the reverse position of colour on the bill of tame and wild swans, happened to notice two birds of this species on a small mere in county Galway. Fearing another error, he spared both. He described one of them as having a large black knob at the base of the bill, which the other had not to the same extent. He added, "this last was either a wild or a young bird." I visited the spot next morning with a gun, to find that one bird was an escape from some private lake, and the other a so-called Polish Swan that had acted the part of a decoy. I fired without success; and this bird I never saw again, though often sought for. I had most unluckily a "light single," the only gun procurable. Both these birds,

however, were shot, as, some days after I left the neighbourhood, the Polish bird returned to meet its fate. Though sold in the county town, I could never discover the purchaser. The Polish Swan frequently uttered a distinct but soft whistle. It appeared anxious to leave, but evidently wished its companion to bear it company. There was most certainly a striking resemblance between these two birds, the black mark in both leading from the base of the bill to the eye. The bill, however, of the wild bird was finer, without any protuberance, and the head of a more snake-like shape than that of its companion. At a distance they had a suspicious similarity, and might easily have been taken for the same species.

THE MUTE SWAN (*Cygnus olor*) nests every year in considerable numbers on the highest ooze of Wexford Harbour, and where the tide never floods more than a few inches. Fifty to sixty of these birds may sometimes be seen dotted about the water on a calm day. These were originally truants from private lakes, as were those on Lough Erne and at Killarney, driven by hard weather to the coast. Here they bring out their broods in perfect safety, and, as is usually the case in Ireland, are never shot or even molested, but are admired and protected by both fishermen and fowlers—the latter wisely assuming that they will act as decoys to other wildfowl. This species breeds in many unprotected lakes and rivers in Ireland, and though originally escaped from private grounds, they in some large waters may be regarded as purely wild birds.

CHAPTER X.

Plovers : Golden, Grey, and Green—Harbingers of Weather—Haunts and Habits—Plover-shooting from a Punt—Devices for Shooting—Plover-netting—The Net : How to make and set it—Decoy-birds necessary.

GOLDEN, Grey, and Green are the three best known species of Plover in Ireland

The Dotterel (*Eudromias morinellus*) is of rare occurrence, and the Ringed Dotterel (*Ægialitis hiaticula*) is so common and so generally distributed as to be hardly worth notice.

It is curious what different opinions prevail in Ireland concerning the three first-named species. Not one shooter in a dozen gives each its proper name. In some localities the Green is known as the Black, and nearly always is the Golden termed the Grey. The latter is frequently alluded to as the "White Plover" or "Sea Cock." It is universally the custom of Irish fowlers to call the Golden the Grey ; one often hears how such a man saw a large stand of Grey Plover, or how, on a certain day, he killed twenty or fifty "Grey" at a shot. This is altogether misleading ; large stands of Grey Plover are never seen in Ireland ; eight or ten even is an unusual number, and three or four far from frequent. On the other hand, the Golden Plover is seldom met with in such small numbers ; they vary

from twenty or thirty together to three and five hundred, and often far more, in a stand. If you have any doubt when a Plover flits by as to its species, bear in mind the Grey bird exhibits, if you are near enough to discern it, a whiter look about the tail and body, with a larger head and stouter beak than does the Golden. The full, black, bead-like eye in the Grey stands out in greater contrast to the head than it does in the other species ; the long black feathers under the wing of the Grey bird is another distinctive mark, the same feathers in the Golden Plover being pure white. The Grey is a decidedly rare Plover in the south of Ireland, and but few drop on that coast when migrating.

Green Plover are regarded by the peasantry as harbingers of wild weather. Though these birds nest in great numbers in most counties of Ireland, their eggs are not sought for, or regarded as dainties as in England.

The Grey Plover is oftener to be seen in the north and north-west of Ireland. Mr. Warren tells me that at Ballina, although not common, they are fairly numerous, and that they sometimes remain in that district as late as June ere migrating. Some years since, on the 29th of that month, he saw a stand of thirteen, but only two of them showed the black breast peculiar to the breeding season. In March, 1877, Mr. Warren observed a stand of thirty on the bank at the mouth of the Moy estuary, where, no doubt, collected ere travelling north, earlier than usual.

Green Plover quarters, as they sit on the sand or in the water. Golden Plover plainly show the yellow tint

from which they derive the name, the Grey appearing very light in comparison, the prominent dark eye of both being most visible.* The Green Plover can never be mistaken, the dark colour and slow flapping motion of the full and curved wing distinguish its species afar. Lapwing, from the flight, and Peewit, from the call, are the common names for this Plover in Ireland as in England.

Few would believe that the Green Plover measures nearly two feet from tip to tip of the extended wings, although the body, when cooked, is no larger than a pigeon. Golden and Grey Plover when seen on the wing are usually travelling to or from their feeding grounds. Peewits may be noticed for an hour at a time whirling and circling aimlessly in the sky, now in rings, now lost to view, then presently reappearing. Like Wigeon, Plover have a habit of swooping backwards and forwards, in gradually lowering pendulous curves, till they finally alight on the spot they have apparently selected some minutes before. When pitched they will sometimes remain for hours motionless as statues, every head turned the same way; the only movement noticeable being an occasional stretch of foot or wing. Now and again both wings will be raised and slowly extended till the points almost meet above the back, as if the bird feared cramp. Nothing

* Curlew at a distance, notwithstanding their much greater bulk and long peculiar bills, bear a wonderful resemblance, from the way they sit, to Golden Plover, especially when herded together. It is hard to credit, but I and others, who know both species under every aspect, have often found it difficult to tell at a distance to which of the two species the birds belonged, although viewing them through a powerful glass at the distance of a few hundred yards.

seems to cause Plover more pleasure than the gently flowing tide ; the first tiny waves that ripple over their feet wake them into life at once, and they commence to dabble and wash with brisk delight, whistling a delighted chorus meanwhile. The call of a Golden Plover is plaintive to a degree, and arrests attention among a host of shore birds. Both Golden and Grey, especially the former, are tame when alone ; but should a few Peewits be with them, the latter will perceive danger soonest, and put all the others up by rising from their midst.

In shooting Golden Plover from a punt, or with a heavy shoulder-gun, however close their ranks, it is seldom that a good shot can be made on the ground ; that is to say, a shot that does execution in proportion to the number of birds fired at. Indeed, no shot is a successful one to a fowler that does not attain this end. Golden Plover sit so low and small that it is wellnigh impossible to send the weight of a charge among them ; if it were feasible to raise them by making a noise all the better, but this with Plover is very risky. They are apt to straggle up too far apart to fire at, and yet afford a scantier shot on the ground. If they do happen to rise well together, and you send the charge straight when their wings are just extended, you will bring down three times as many as if you had taken them sitting. I have succeeded in stopping fifty couple of Golden Plover at a shot, by judiciously raising them ; whereas thirty to forty birds, from the irregularity of the ground, would have been as many as I could have expected had I fired as they stood.

They must not, however, be allowed to rise too

high before firing—four or five feet from the ground at most. The circle of shot will then take those on the wing, those in the act of rising, and any standing as well. Large numbers of birds that have been closely huddled on the ground soon open out when sprung, for mutual freedom of flight. They then, perhaps, still offer a good shot for some distance, though not the best, which is what one should strive for—a lesson only learnt by repeated failure.

Plover and Dunlin, especially the latter, open out less than other shore birds; they fly with almost mathematical accuracy, each wing seems to meet and just touch that of its neighbour; when turning the change is as one bird, or a regiment facing to word of command. The instant variations of colour these birds go through are beautiful, the gleaming silver white, then the black, as their dark upper surface is towards the spectator, all the work of a moment; against a dark background they may be showing in vivid relief like glittering spray, the next instant as the faint shadow of a cloud, and the noise of many thousand Dunlin as they rush past is as a storm of wind through the bare trees of the forest in winter.

Golden Plover may be seen in large numbers on the wet meadows and uplands of Ireland, especially on the soft green pastures bordering freshwater lakes, and which frequent floods make so acceptable to them. This bird is really an inland species, but is driven to the coast by hard weather, and should the frost continue, they vanish for the winter to southern latitudes. About the end of October, or first week in November, Golden Plover congregate in immense

stands on the coast. They may be seen thus for perhaps ten days, when they disperse inland, and are only brought back to the tide by severe frost ; they breed freely throughout Ireland in suitable localities. Though a handsome and gentle-looking bird at all times, a Golden Plover appears in its full pride and beauty when in summer plumage, with the black breast. This Plover has a pretty habit of trotting nimbly along a few steps, and then stopping motionless for some seconds ere resuming its run. They may be seen collecting in the centre of the fields about nightfall, and a good shot at that time is often counted on by a fowler who has followed them unsuccessfully throughout the day.

If a number of Golden or Green Plover are passing overhead out of shot, and powder is to spare, it is a common custom to fire in their direction. The sudden alarm will often cause them to drop quickly downwards and sweep within range, thus affording a good chance of a shot. Why they should do this, and so run into danger, I cannot say. Perhaps, when alarmed, they are not conscious of more than an effort to change their direction, ignorant from whence the startling noise proceeds ; and it is naturally easier for them to suddenly lower their flight than to ascend. All I know is that, by this simple *ruse*, I have obtained many plover that would otherwise have escaped. On firing in the manner described, they will now and then drop so quickly, that for the moment it is hard to tell if there be stricken birds among the living. Both Grey and Golden Plover during the breeding season change their breasts from white to black. I have

shot the latter by the end of March with the dark feathers already showing plentifully. The Grey I have never shot in full breeding plumage. They are essentially shore birds, and never breed in Ireland.* I once obtained a Grey Plover in July, but it was a disabled bird that could not migrate. My experience shows me that when wild birds are left behind through weakness or wounds, they often do not undergo a change of plumage as much as is usual, and sometimes scarcely at all. I have seen Grey Plover, partially black-breasted, as late as the 25th September, and yet without any sign of dark feathers in April. The note of the Grey Plover is commonly a more prolonged and louder whistle than is that of the Golden, but equally plaintive. This I have remarked from keeping both species in captivity.

I may here note, what *every one* may not know, namely, that the Grey Plover has a hind toe, which the Golden Plover lacks. This peculiarity is a certain mark whereby to distinguish the two species when immature, as at that period of existence the Grey Plover exhibits yellow spots on the back and breast, similar to those on the Golden Plover. The Grey Plover in Ireland is a coast bird entirely. I never saw one away from the tide.† It stands a little higher than

* Those who are interested in the nesting haunts and habits of birds are indebted to Messrs. Seebohm and Harvie-Brown, who in a recent work describing their visit to Siberia in the interests of Natural History, have proved by personal observation that the Grey Plover breeds in the great marshy plains bordering the Petchora River.

† Mr. Harting tells me that this is contrary to his experience in England. He has shot Grey Plovers in the marshes in Lincolnshire, and Huntingdonshire, at least twenty miles from the sea. He adds that this bird is apparently much more frequently met with in England

its fellow, and in bulk and appearance is somewhat larger, but as a rule little heavier—not more, perhaps, than an ounce, and seldom an ounce and a half. It is comparatively a rare Plover in Ireland. During a long winter's shooting a dozen is often the most I have happened to see. Golden and Green Plover, on the contrary, are netted in Ireland in thousands, if the winter be mild, by men who make a living thus. I have known one man, an adept at this work, take twenty pounds' worth of Plover in a week, which, at a low estimate of value, would represent at least a thousand birds. All Plover will be found hard of approach when congregated in an open field, should the shooter try to steal directly towards them. He should boldly skirt the "stand" without looking anxiously at them, gradually narrowing the circle with each round he takes, and finally, with a rush, take his chance of a shot.

Another method of getting within range of Plover congregated in a field, is to tie a dog to a short stick, and peg it down into the ground, leaving the animal a tether of five or six yards. Secure him a couple of hundred yards away from the stand to windward, and every bird's eye and head will be turned in his direction as he moves, or struggles. You may then steal up to them on their other flank against the wind, and will always get within fair, often easy shot.

than in Ireland, especially at the periods of its migration in May and October. In the latter months he has often killed ten or fifteen in a day, besides Curlews, Knots, and other shore birds, with an ordinary 12-bore shoulder-gun. "In the south of England," he says, "the Grey Plover is the latest of the shore birds to arrive on the autumn migration, seldom appearing before the first week of October."

The eggs of the Green Plover, as before stated, are not sought for, and sold as dainties in Ireland, as they are in England. When seeking their nest and that of the Golden Plover, I have often noticed that they seldom if ever rise straight off their eggs, but will rather run crouching sily through the grass or heather for some distance, and then flap up and fly towards the intruder, thus deluding him with the idea that they have at that moment left their charge; instead of which the eggs may have been passed, and almost trodden underfoot. You should not look where you *think* the treasure is likely to be found, but, when the birds are sweeping over a field or meadow, hunt in a regular manner up and down from end to end, or round a stick, in ever widening circles. Do not imagine you can get a hint from the Plovers' screams and motions; they are far too cunning for that.

If the winter be mild, Golden Plover will sometimes remain till the middle of December. But one week's frost will drive them nearly all away. The large "stands" then vanish, and but a few birds are left scattered here and there. The home breeders will return again to the coast by the end of February or beginning of March. Green Plover also are very sensitive to frost, and an early touch of hard weather will send them away. But should the season be rainy they will stay in large congregations till Christmas, after which date they are never numerous.

PLOVER NETTING.

Plover netting is an art little understood, save by the few who make a living by it. These men are naturally jealous of imparting information on the subject, fearing lest the practice might become too common, and their trade be damaged in consequence.

Sooner than show how the net is worked, or allow it to be inspected by a curious stranger, I have known a fowler pull his net, pack away all his belongings in a sack, and desert for the day a locality abounding in birds ; and doing all this in order to keep secret the nature of his proceedings.

I recollect some years since a gentleman whose lands Plover visited in large numbers, paying not a few pounds for one of these nets complete, which, with some difficulty, he obtained by sending a special emissary a long distance. His prize was small, a couple of poles, half a dozen pegs, a finely made net, a coil of rope, and that was all. What he hoped to find a simple matter, namely, the arrangement of it, baffled him entirely. He tried this way and that to no purpose, and never captured a bird ; nowhere was a lesson to be obtained, nor could any sum of money in reason buy the necessary directions from the fowlers near. Now, though a pound or two may supply the requisite implements, it requires practice, care and great nicety of hand and eye to use them successfully.

But, in order to satisfy myself, and by way of test, I placed the following description last winter in the possession of an intelligent gamekeeper. Either he

is very clever, or my description is lucid, for he has made a net and all appliances, and caught many hundred Plover at this his first attempt, to the envy and astonishment of his fellows, though he never witnessed the sport before in his life.

The average take in January (which is the best month) would, if the weather were mild, be some thirty to forty dozen birds per week to each net. The dealers give 8d. to 10d. apiece for Golden Plover, and 4d. to 6d. apiece for Green. This total is now and then far exceeded in an open winter should the "stands" be numerous.

Plover-catchers have a mutual understanding for their general benefit. Each takes a large extent of country, and one rarely encroaches without leave on the other's territory.

Most netters keep a donkey-cart to transport their gear, and to carry the spoil home or to market, besides paying a couple of active assistants to scour the district on every side to look for chances of sport. Green Plover are the usual victims, Golden less commonly so; but the latter are taken in the greatest numbers at a haul. Curlews are also taken. This wary bird—a source of trouble to the most cunning shooter—is, strange to say, the easiest of all to take in a net. As Teal are to the decoyman, so are Curlew to the fowler in their innocence of his snare. Geese are captured by means of a heavier net, and I have known twenty-five Bean Geese to be meshed together, lured to destruction by one of their kind previously caught in a pitfall or trap. Even rabbits may be taken of a fine evening, and green food used as a bait.

FIG. 2.

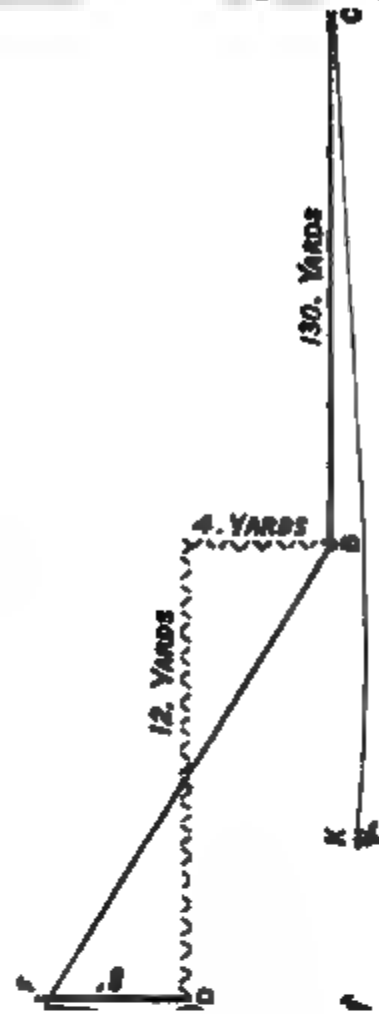


FIG. 3.



PLATE 7.]

PLOVER NET.

N.B. - Small arrow shows direction of wind when taking birds.

[P. 185.]

Geese, Curlew, and Plover on alighting always choose bare open ground. This no doubt they consider safe from hidden enemies, and so ignore danger under foot.

At one fall of the net sixty to eighty Plover is a good sweep, and a hundred to a hundred and fifty have often, to my knowledge, been captured at once. The more simply a net is constructed, the better it works; all hinges, springs, and elastic straps are failures, however cleverly conceived.

I will now describe the whole apparatus, and the method of using it, premising only that experience is the best master, and the fowler will from time to time discover wrinkles that practice in the field will alone supply.

INSTRUCTIONS FOR SETTING THE NET.

The net is laid flat on the ground ready for action (*see* full-page Plate, fig. 1). When pulled it lies as shown on the same plate (fig. 2). The page is not large enough to show the poles, which are hurled twenty paces distant. To set the net, sink the two large shoe-pegs (fig. 3), their tops level with the ground, sixteen yards apart (taking care to have the wind fair between them and their hollows facing it). Against these pegs lay the poles; the foot of each pole, which should be bluntly pointed, in the half-inch deep hollow of either peg, both poles straight towards the wind. Clear away or stamp down the earth a foot or so in front of the hollows in the pegs, so that the pole ends may butt well against

them (fig. 3). The poles should lie nearly flat on the ground, their ends being directed as shown in figs. 1 and 3. Drive into the ground one of the long pegs E, of which there are a pair, each with its smaller

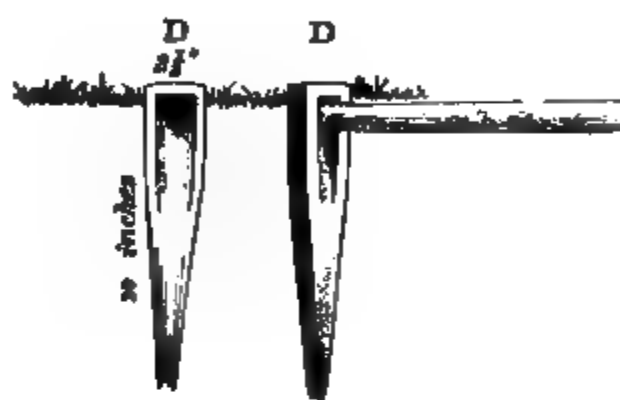


FIG. 3.

peg, G, attached (fig. 4), one at each notched end of the poles and just touching them (fig. 4); the notches in these pegs to be turned at right angles to the poles, just above ground, and towards the side from which

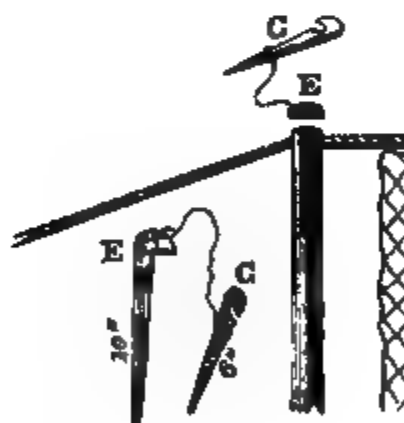


FIG. 4.

the fowler pulls the net. The use of the second smaller peg tied to each long one will be presently seen. Now step twelve yards outwards from the shoe-pegs, D D, keeping them carefully in line. Make a

mark with the heel, and step four more yards at right angles, as indicated by the dotted lines (fig. 1). At the point A drive in a strong notched peg, ten inches long, like those used for holding tent ropes. At the point B put in another peg with a round smooth top of one inch diameter, leaving it about two inches above ground. In exact line with these points A B, and at C, place a third stout peg similar to A. The distance of this last one from B varies according to the nature of the ground, as it is from this point the fowler pulls his net. In a large bare field it should be 130 yards ; if there is good cover, from 90 to 120 will do ; never much

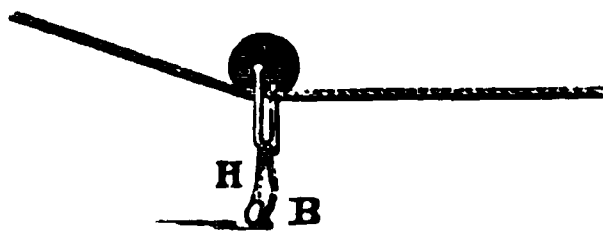


FIG. 5.

less, if possible, or, the rope being short, will not give sufficient stretch to spring well. Now join A and C by means of the rope, as shown in fig. 2, and, if the three pegs are properly in line, it will just touch B. If the rope is wet it must be stretched quite taut between A and C; if dry, left a little slack. This can be done by having a few feet of spare line at A, and wrapping it round the peg at that point, or loosening it, as may be necessary. This done slip the loop, H, over the peg at B. To this loop is attached a small pulley, in which the rope runs freely (fig. 5). Next draw the rope as you would the string of a bow, walking backwards,

until you get it into the notch at the end of the pole (E D, fig. 1), and into which it should sink easily just its own depth (fig. 4). The notch being placed in a line with the rope and ground, it should require a strong pull to put the rope into this notch. When in, hook the rope near the pole end *temporarily* into the eye of the small peg, G, that is tied to the one, E, sunk as before described. This will hold the pole down and the rope, whilst the other pole and the net are being arranged at leisure. Now move to pole F D, and draw the rope into *its* notch. This last operation should require your *utmost* strength to do. If you can pull the rope even six inches beyond the notch at the pole end, it must be made tauter at peg A, and the other pole freed again in order to do this. If a violent strain will not get the rope over the notch, slacken a little at A. Anyhow, it should require great force to get the rope into its place, for the tighter it is *here*, the quicker and better the net will spring over, and so take the birds. This done, hook the rope safe by means of the eyed peg, G, as was done at the other pole. Now proceed to arrange the net, which is threaded on the rope, and when set, as in fig. 1, almost reaches from pole to pole.

Stretch it out on the ground even and flat *with the wind*, then draw its base line towards the rope, carefully laying it in thin folds, not on any account in lumps and shadows, till it shows as in fig. 1, its base nearly in line with the large shoe-pegs, D D, that the poles now press so hard against. Next cautiously unhook the peg, G, that holds down the rope, and pole end at E, in fig. 1, placing it as

shown in fig. 6; act similarly at the other pole at F, fig. 1. As the broad end of these little catch-pegs, G, press against the ground, their points over the rope, the long notched pegs (E, fig. 4) holding their centre, they cannot fly up.

Place the dead decoys head to wind on their supports in the ground, their legs over the side arms, as in figs. 1 and 2; covering the short arms (which are two inches long) of these irons with the wings and feathers, put the longest arm (four inches long)



FIG. 6.



FIG. 7.

of the three prongs against the breast, its point into the bird's chin underneath. When nicely set they have a wonderfully lifelike appearance (fig. 7).^{*} Clear of the net at K put the live decoy, fixed as in fig. 8. The ring of iron is filled with soft thick cloth, so as not to damage the bird's legs, and the legs are secured, as shown in the sketch, by means

^{*} If no recently-killed plover are to be had, which are far the best, stuffed ones may be used. They will last a season, but are never so successful as recently-taken birds. Wooden ones, under all circumstances of fowling, are useless to attract. They are too hard and stiff, and have no soft plumage to ruffle in a natural manner.

of one large or two or three small feathers passed underneath the ring next the ground and through the loops formed by the leg joints.* The live decoy string is brought up to the fowler's hands at his hiding-place at C. Pluck up a little grass and fern to partly conceal the poles, and press the net and part of the rope it is on flat with the foot.

Retire to the hiding-place at C; if there is no means of concealment, crouch low when birds

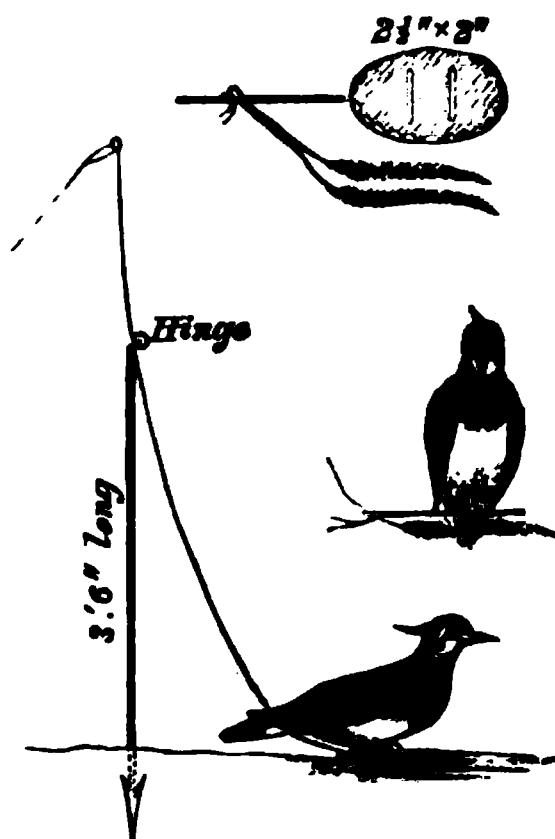


FIG. 8.

appear in sight. A couple of boughs or a bush stuck into the ground, with grass or rushes sprinkled thereon, will make an extempore shelter in a few minutes, but it is rarely necessary to do this. If Plover are circling about, and do not notice the dead decoys, pull the string of the live one; the bent wire will lift him off the ground; he will spread his broad wings as if flying, and when lowered

* The wire to which the live decoy is secured (fig. 8) should be $\frac{1}{4}$ inch thick, and 3 feet above ground.

by leaving the string loose, appear to settle. The wild birds are pretty sure to see him ; will wheel round a few times, and finally head up against the wind to the cluster of dead decoys. Flying or sitting, once they appear between these and within say eight feet of the ground, pull *hard*, and you should have enough for a pie, and a big one too.

How is this effected ? Thus :—On the fowler pulling his rope at C, that instant the pole ends at E and F press against the catch-pegs (G, fig. 6), freeing them from the notches of the long pegs (E), and setting the rope at liberty. The poles being somewhat bent, and the rope being long, elastic, and greatly stretched, both fly upwards. The poles retain the rope in their notches till they are upright (for their other ends press hard all the time against the shoe-pegs, fig. 3, D D) ; they are then hurled far away. The rope, taking the net with it, in a second attains its original position, as it was before pulled out of line, that is from A to B (fig. 2).

The folds of the net partly come out in transit as it stretches over the birds, and as it appears in fig. 2. Were it set extended to its full width it would come as a wall against the birds, knocking them clear, and failing to hold them. Falling loosely its effect is perfect. To assist this looseness a net should be made to bag a little all over, and to within a yard or so of its edges. Were it made flat it would never hold a bird. A new net, or one bleached in the sun, should be coloured a light brown, or barked.

The fowlers are very particular in this respect, and now and then give their nets an accurate stain

by seeking a field frequented by cattle. How, may be better guessed than described. After taking birds, do not fail to gather up any feathers that may lie about ere resetting, or the next comers, though they approach the decoys innocently, will, on seeing such an equivocal circumstance, sheer off out of reach. To take the captives out, do not lift the net, but fold the wings of each bird, and so pull them through the meshes head first one by one. When pulling, that is freeing, the net from C, it cannot be done too smartly; this the fowler will not achieve properly without something to put his feet against to get a good purchase. Sitting on level ground, he can stamp two holes to put his heels in; he should even hang hard on to the rope though he sees the net is fallen all right; this will bring the net well up between A and B. If all works smoothly the loop (H) will free itself from B, and cause the net to come over better than it otherwise would do.

If the rope is made in pieces, and joined as wanted, it is more handy than when in one length.

The point (C) can of course as easily be put in the opposite direction, should the wind and ground necessitate it. The net may be made of hemp, about one-half as thick as the lead of an ordinary pencil, and no stouter than a trout-fly line. The meshes are $2\frac{3}{4}$ inches square. The dimensions of the net, when stretched out flat and level, are given in fig. 9.

To make the net, cast on to a loop about one hundred and sixty meshes of three inches square (to allow for shrinking). Then work on in rows until

some eighty-five meshes deep are made ; then net one row twice and a half as large as the others, missing every alternate mesh (see fig. 10). The large meshes must be of string three times as thick

15 Yards

15 Yards



FIG. 9.

FIG. 10.

as the smaller ; the rope to be threaded through the large meshes. This dropping every other mesh along the head of the net gives the looseness that is required to bag the birds striking it.

The rope, of $\frac{1}{4}$ -inch diameter (not thicker than a lead pencil), should be of white manilla : tarred rope has not sufficient spring in it.

The poles are made of the best ash ; but yellow pine answers admirably, being light and elastic, and if it stands the strain at first, it will last a season.

Their length should be 8 feet and 7 feet 9 inches ; the shorter pole nearest A, the longer one next B. Their diameter at centre should be $1\frac{1}{8}$ inch ; if of pine, $1\frac{1}{4}$ inch, and tapered to $\frac{7}{8}$ ths at each end.

The net is designed to take all birds that come within a space 16 yards long by $6\frac{1}{2}$ yards broad, and, for some portion of its sweep, 8 feet high.

As an all-important fact, it should be borne in mind, that when there is little or no moon, at night, or if the moon be obscured, and it is dark in consequence, the Plover must be sought in totally different localities to those in which they would be found were the nights clear. On days following dark nights, Plover will be found feeding on the ploughs, grain fields, and wet meadows ; the reason being, that they were unable to find their food the preceding night. On days following bright nights, Plover will be seen resting motionless on the grass fields and dry lands, or at intervals hovering lazily over them. They are not then seeking food, which they were able to find overnight. They sit best, that is to say, closer together, on rough, coarse, short grass than they ever do on smooth, and always prefer slightly rising ground, where they collect much closer than they do on a level. For this reason the net should be invariably set on a little eminence if possible. A small knoll in the centre

of a field, perhaps a foot or two only above the land around, is an admirable vantage ground. Under any circumstances the net should be set so that the wind blows accurately between the poles, in order that the net may always fall exactly *with* the wind. Should the wind change even slightly, the net must be reset. A slanting breeze, or one a little to this side or that, and the net will fail to fall or take birds as it should. A few bits of grass thrown into the air before commencing will indicate "the eye of the wind."

In a light breeze the movements of Plover are not so favourable to the fowler as in a moderate or strong one. In the latter case they fly low and wedged together, in the former high and scattered. They *always* head the wind and face with the decoys when flying up to, or pitching among, them. This is, therefore, another and important reason *why* the net should fall downwind, or against the birds meeting it, as it sweeps over. The decoys must at all times be placed head to wind. If a net be properly fixed, it will instantly, when freed by the fowler, fly over the birds, scarcely giving time to those on the ground to open their wings. The usual plan is to pull the net at the moment the wild birds are flying over the dead decoys; and Plover are more frequently taken in the air than on the ground.

It requires some practice, and a quick eye and hand, to allow the thin part of a stand to pass by, and to snap up the thickest cluster as it reaches the fatal spot, *i.e.*, between and over the decoys, and within some eight feet of the ground. If the

decoys cannot be seen by the fowler from his ambush, as is now and then the case, by reason of undulating ground, he places two small bushes (which do not look so suspicious as sticks) halfway between his hiding-place and the net, each bush being in a line with the outside decoys. When he sees his game pass between these marks in the distance, he knows they are over his net, and at that instant pulls and makes his capture. If Plover are seen frequenting certain fields late in the evening, the fowler should be out very early the next morning, near the favoured spot, ere they shift their quarters, as they constantly do. "Here to-day, gone to-morrow," no one knows where! It never answers to wander here and there in search of Plover, net in hand. When a good position for the net has been fixed on, it ought rarely to be moved again for the day. The haunts of the birds should be discovered, and the ground where they have been seen patiently worked. If they pitch at a distance, send a boy to range them up, and they will, as they wheel about in the sky, probably see the decoys and pay them a visit ere long. I do not consider a Plover call a necessity, though now and then of assistance; for the birds can usually see the decoys quite as far as they can hear a whistle. Many fowlers never use one, but if they do, it is made from a lobster's claw, with a hole at the end to put the finger on and off as in a flute, to modulate the note. Only one live decoy is needed, and some ten to fifteen dead ones. Each for its kind—Plover for Plovers; Curlew for Curlews; Pigeon for Pigeons. These latter are

easily taken, for they will come to grain, and feed right up to the net. I mean, of course, wild Pigeons. Green Plover will, however, attract the "Golden" quite as well as their own species—often better—for it is the larger bird of the two, and more visible at a distance. Golden Plover are very fond of their society, as the latter are by far the most alert as sentinels. A gunner will seldom get a good shot at a stand of Golden Plover, if any Green ones be with them, as the latter always perceive danger first, and, flapping out of their midst, take all the rest away with them.

CHAPTER XI.

Snipe and Woodcock—Residents and Migrants—Haunts and Habits—The “Humming” of the Snipe—Good Snipe Districts—Snipe-shooting, Past and Present—Good Bags—Weight of Snipe—Sabine’s Snipe—Solitary or Double Snipe—Jack Snipe—Springes—Woodcock: Weight of—Migration of Woodcock—Evening Flight—Nesting in Ireland—Woodcock carrying its Young—Good Years for Cock—Remarkable Bags.

SNIPE, like their larger relations, vary much in plentitude different years. But many more of these birds nest in Ireland than is the case with Cock. In some districts Snipe breed numerously year after year. During frost they may be heard all through the night on the shore and flats, by the fowler lying in wait for Duck, as they fly from one spot of ooze to another. On the ground I never heard them utter any sound. I have remarked Snipe flutter up near my punt at night, and they would then cry. Though the same birds might have been feeding for an hour close by, they were invariably still, perhaps too busy with buried bill to be otherwise. I have sometimes been conscious of a Snipe pitching within a few yards of me at night, but could never see them. When it is almost impossible to see a Snipe on the ground by day, however close, how doubly hard it is, even on a clear night, may easily be imagined. During severe frost I have, through curiosity, crept up to springs on a mountain side, where I knew

many Snipe lay within a few square yards, and, though gifted with excellent sight, could rarely see one. A few steps nearer and a "wisp" of ten or twelve would rise screaming. On one occasion I brought a powerful glass to bear on such a spot at a distance of some thirty paces. I could then count seven, some standing hunchbacked and motionless, others squatted on the dried grass, looking no bigger than mice or frogs. On flinging a stone at the spot, this time at least fifteen sprang. The next visit I paid was with a gun, when I fired on chance, guessing their position, and killed five, though I saw none. The peasantry and fowlers, by constant practice, bag many Snipe during frost by creeping up to the springs. They admit, however, that it is usual to kill more than they see when pulling trigger. These men also wait in concealment near the wet places where Snipe feed, and shoot them singly as they come. On moonlight nights, their plan is to put a white feather into the ground, in a favourite spot the birds are known to frequent, and when Snipe alight they fire a dose of the smallest shot at the mark, now and then obtaining two or three of those feeding near. The movements of Snipe are more influenced by the moon than might be supposed. Though they will be found in plenty during the time of bright nights, as the moon wanes their numbers diminish daily in their usual haunts. In many districts, when the nights are dark, the local shooters consider it a waste of time to seek them by day. As most shooters know, on dark nights, though Snipe live partly by suction, they cannot always obtain food as if it were

clear, and are in consequence the next day on the move, and of course wild, watchful, and hard to find. With a bright moon they feed as they like, and are torpid and lay well the following day. On such nights Snipe travel to high lands and mountain slopes, if near; flying some distance in search of food, and distributing their numbers evenly through the country. But should the nights be dark, a few will only be found, and those in wisps, congregated in the bogs and soft spots, which are so well known to the birds that they are easily discovered in the thickest weather. The common Snipe breeds in most counties of Ireland, but most abundantly in the south-west and south. The first egg is generally laid about April 1st, but I have found a nest with two eggs as early as March 20th.

About a month before this date they may be heard emitting that singular sound which has been variously described as "humming," "drumming," and "bleating." The mode in which this curious noise is produced has puzzled many an observer, and various explanations have been suggested; some favouring the view that it is a vocal sound, others maintaining that it is produced by the action of the wing-feathers or tail-feathers, or both, in the bird's rapid descent through the air. This question, I notice, has been fully examined and commented upon in an interesting article by Mr. J. E. Harting, in *The Zoologist*, for April, 1881.

Snipe and Cock, during the nesting season, will remain squatted in the herbage motionless, on the chance of their being passed by unperceived. Snipe are very fond of building in partly isolated tufts of

dry peat and grass, such as are to be found in the marshes. When jumping from one hillock to another in search of eggs, I have several times almost trodden Snipe under foot. At this season both Snipe and Cock steal through the grass more like rats than birds.

The west of Cork was, some years since, famous for Snipe. Captain A. Morgan, who knows that part of the county well, tells me he has shot fifty Snipe in three hours, near Skibbereen. He adds that they nest in considerable numbers in that locality. Sligo is another county that was, and still is, good for Snipe. Sir R. Gore Booth, a few years since, killed to his own gun sixty-five in a day, and many times sixty. He remarks that, owing to snaring and netting, as well as to the number of guns in the hands of poachers, they are getting scarcer every year. Mr. Longfield, of Bandon, county Cork, tells me he well remembers when thirty couple in a day to one gun was not unusual; but that now (1881) he considers, in his part of the country, ten to twelve couple is a good day's work. In Mayo, Lord J. Brown writes, "Snipe are steadily diminishing, from being constantly shot for sale by poachers, as well as by those who have a right to shoot." Formerly Mayo was the best county for Snipe in the United Kingdom; now, the sport is indifferent. Some years ago, twenty to twenty-five couple a day was common shooting, and would be kept up off and on throughout the winter; now "twelve or eighteen couple a day, for perhaps a dozen days, is the most that can be got." Snipe are being sadly thinned in Ireland year by year, and, amongst

other causes, by the general use of breech-loading guns.

Many districts are nevertheless still very good for Snipe in Ireland, and indefatigable walkers, who know the country, now and then add up a large total in the season ; though a sensational number in a day is very unusual. Bags of from ten to fifteen couple are not unfrequent, and from twenty to forty and even fifty couple in a day not unheard of in well-protected and suitable land. For example, Patrick Halloran, the well-known Snipe-shooter of co. Clare, on unpreserved ground obtained the following total in the season just past (1880-81). I have before me his record of birds killed day by day, and the receipts for same when sold, both of which correspond. It gives a good idea of what can still be done by an energetic and hardworking shooter. The fame of this man is widespread, and sportsmen are in the habit of staying at an inn hard by, to whom he acts as guide. He is a perfect Snipe-shot, and one of the few men living who can account for five Snipe out of seven fired at, from the beginning to the end of the day. His total bag for the season 1880-81 was fourteen hundred and twenty Cock and Snipe. The heaviest bag of Snipe in a day, forty-five. The number of Cock killed was one hundred and thirty-eight, half a dozen Duck, and thirteen hundred and seventy-six Snipe. It must, when looking at this large total, be borne in mind that it exceeds the number obtained by him in the ordinary mild winter of Ireland.

Co. Cork, before alluded to as a famous county for Snipe, was not so long ago the scene of a since

oft talked-of Snipe-shooting match, the particulars of which are so interesting that I give them in full.

“CORK, *May 30th*, 1881.

“DEAR —,

“Several years since a bet was made by a friend of mine that my brother and I would shoot more Snipe in a day than any two others that could be named, each party to select the country they wished to shoot over, and both to shoot on the same day. A day early in the month of November was fixed. My brother and I went to the neighbourhood of Dunmanway (the day was very mild and fine, and we shot over dogs), and bagged fifty-nine and a half couple (119 birds).

“I got thirty-seven and a half, and my brother, who could not walk well, twenty-two couple. The other party did not kill so many, and we won the bet. This was a good bag for two guns, but nothing wonderful, and I have heard of much larger being made.

“Yours,

“W. H. TOWNSEND.”

Mr. J. Butler, of Waterville, co. Kerry, has kindly shown me his game list for 1880-81, as an example of what is done in his district in a good season. Total for two guns, four hundred and thirty-five head, consisting of one hundred and fifty-six Snipe, one hundred and thirty-four Woodcock, fifty-two Duck and Teal, forty-one Plover, twenty-nine Grouse, and twenty-three Hares. This shooting is in an open and a very wild part of the country,

and requires a good walker and a knowing hand to make a bag. The best day was in January, when two guns obtained thirty-two Cock, eight Duck, and a dozen Snipe.

The far west of Kerry is at this day famed for Snipe-shooting. Within the past ten years fifty and even sixty couple in a day to one gun has, to my personal knowledge, been obtained. Just previous to the introduction of breech-loaders, a gentleman now living, and whose accuracy is unimpeachable, formed one of a party of three who set out from Tralee, co. Kerry, to shoot Snipe. His gun at its first discharge became so damaged that it was useless. The owner, notwithstanding this mishap, beat the ground all day with his friends. In the evening the two shooters counted out a hundred and six couple of Snipe as their joint effort.

When, some forty years ago, Captain Barclay performed what was in those days considered a wonderful feat, namely, walking a thousand miles in as many hours, it gave rise to many similar achievements. For instance, a well-known sportsman of co. Limerick undertook, and actually succeeded, in shooting a thousand Snipe in a thousand hours for a considerable wager. The ground chosen lay within ten miles of the city of Limerick, and the bet gave rise to great speculation and interest at the time.

Mr. Edward Gethin, of Earlsfield, who has a large wild extent of shooting in co. Sligo, in reply to my inquiries concerning Snipe in his district, writes : " With regard to the questions you ask me, on looking over my books I find that my best total

at Snipe shot here in a season was 959, and that was during the winter of 1877-78. I have never seen more than four or five Jack Snipe in a day, many days none at all ; taking them on an average, not more than two or three birds a day throughout the season, so that I should say about here they hardly bore a proportion of one in forty to the Common Snipe ; neither did I ever know or hear of an authenticated case of their breeding in this country, though I saw one whilst Flapper-shooting in July this summer, but think probably it was a wounded bird that had remained behind."

In addition to this information, Mr. Gethin has kindly sent me the following extracts from his game-books, which speak for themselves ; they include some of his best days in various years, and show not only how early Snipe visit Ireland, but also how numerous they must breed there :—

1873.

September 28th,	Snipe 44	}	In 9 days, 360 Snipe.
October 11th,	Snipe 47		
„ 17th,	Snipe 41		
„ 20th,	Snipe 38		
„ 31st,	Snipe 32		
November 6th,	Snipe 50		
„ 10th,	Snipe 41		
„ 13th,	Snipe 31		
„ 15th,	Snipe 36		

1874.

November 2nd,	Snipe 32	}	In 5 days, 209 Snipe.
December 5th,	Snipe 56		
January 7th,	Snipe 39		
„ 12th,	Snipe 46		
February 21st,	Snipe 36		

1876.

October 30th,	Snipe 44	}	In 3 days, 104 Snipe.
December 16th,	Snipe 30		
February 2nd,	Snipe 31		

1877.

October 22nd,	Snipe 38	}	In 5 days, 203 Snipe.
November 10th,	Snipe 38		
" 25th,	Snipe 46		
" 26th,	Snipe 46		
December 5th,	Snipe 35		

1878.

October 25th,	Snipe 58	}	In 3 days, 141 Snipe.
" 29th,	Snipe 41		
November 16th,	Snipe 42		

1879.

November 1st,	Snipe 39	}	In 8 days, 231 Snipe.
" 11th,	Snipe 40		
" 12th,	Snipe 22		
" 15th,	Snipe 33		
" 17th,	Snipe 23		
" 18th,	Snipe 35		
" 19th,	Snipe 18		
" 21st,	Snipe 22		

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no doubt, collect in such places, but will rise in wisps and not afford pleasant sport in consequence. Where Snipe rise and lie best is in the large wet green fields, in which the water, though splashing nearly every step, rarely reaches the ankle. The reason that country fellows who shoot Snipe excel others even far better shots than perhaps they are, is because they know the district so well, though of vast extent. A stranger would beat up and down a field, perchance, and consider that he had not properly tried it till he had walked it all out. Not so with these home-bred trampers, who know every soft likely place, with its tiny stream or patch of rushes; they make straight from one such spot to a similar one further on, and so through the day, picking up their game here and there. Every field or bog has *one* favourite haunt or corner of its own that Snipe frequent, though may be by but a solitary bird.

This fact these fellows know well, and make for it at once, whilst an amateur would be, as he imagined, systematically trudging the whole extent before him.

Snipe do not visit streams and springs to drink, but rather to wash the cloyed earth off their feet and bills after feeding—the same with Cock. Frost is another matter, as then the edge of moving water is unfrozen and food may be derived therefrom. If a sand-covered worm be given to a Cock or Snipe the bird will take it down, appearing to squeeze it as it is swallowed. The sand or grit on either side of the mouth in this is separated from the food and forced

out ; if water be put near, the bird will run to wash its bill, but will rarely be seen to drink.

Within a week of a frost Snipe and Cock are always in the best condition. Nature then favours them, for the worms, that in a frost retire deep into the soil, come close to the surface in a thaw, and afford the hungry birds an unlimited supply of food.

Though Snipe may be very scarce there is always some particular spot they seem to fancy. It may be but a bunch of wet grass, or a tiny reed-grown puddle. Day after day I have shot a Snipe in such a place and never flushed but one from it, yet there again will another be found the next morning in the same haunt, and so on through the winter. Both Snipe and Cock have a curious habit in fine weather of lying on their sides with one wing partially expanded, as if in enjoyment of the genial air. They both vary also extremely in colour and size. I have seen them of various shades of buff-brown and yellowish-white. A Cock in the possession of Lord Gormanston is a perfect albino, with pink legs and feet.

Dr. Birkitt has a Common Snipe stuffed that weighed five and a half ounces. I have weighed several of five, and some as little as three ounces. Mr. Ussher tells me he received one in 1879 that weighed six ounces ; its length 11½ in.

There are still in Ireland many wild districts, little kingdoms in size, where Snipe are every year fairly abundant, and which the smart-clad, money-scattering sportsman has *happily* not yet invaded, where the active, willing peasant, with his traditions

and tales of centuries to beguile the time, is even in these days ready to follow the shooter for a long day's trudge, and think himself well paid too, for a shilling—a man who, should your tobacco be carelessly left behind, perhaps high up the mountain side, whence you toiled for a well-won view, will step up for it after the day's fatigue with the nimbleness of a stag. For genuine wit, story-telling, sympathy, tact and good-humour, these poor wild, half-clad fellows are unrivalled. A long weary tramp is as nothing when listening to their accounts of the seals, the fish, the fowl, as well as of smuggling, poaching, fairies, and Lord knows what besides. They are never at a loss, should the larder be empty, something substantial badly wanted, and a clean miss at a fine hare be your misfortune at the day's end. No useless condolences are *theirs*, putting you more out of temper than before; and you cannot but smile at the cheery remark—"Begorra, your honour, you made him *lave that, anyway*."

On well-preserved lands more Snipe were killed in the seasons 1878-79, and 1880-81, than ever remembered in Ireland since 1855. (It was in the February of that year that the deep snow proved so destructive to wild game.) I know several shooters who killed forty couple to their own guns in a day, in one or the other of the winters mentioned, and one gentleman who in the far west obtained fifty-three couple in a day himself, and thinks, had he not run out of ammunition, he would have accounted for another dozen birds at least.

Colonel J. Peyton, late of the 7th Dragoon Guards, writing to me from co. Kerry, under date 13th

March, 1882, says:—"The best day's Snipe-shooting I ever had in Ireland was the one referred to in your letter. In India I have frequently killed eighty and ninety couple of Snipe before midday in the marshes (not paddy-fields or rice-fields) on the banks of the Cabul River, where it debouches from the hills before entering the Peshawur Valley. The Snipe there are identical with those of Ireland, and quite as wild and quick on the wing. In the rice-fields of Bengal, in my opinion, the birds fly slower and are more easily killed.

"In Kerry I could always get from twenty to twenty-five couple of Snipe, whenever I wanted to make a bag; but my average was about seventeen couple, with a few Woodcocks, a Hare or two (for soup), a dozen Golden Plover (the result of a lucky shot), a few Teal, an odd Mallard, and frequently a Wild Goose.

"The following are some of my best bags of Snipe:—December 30, 1878, sixty Snipe; December 31st, sixty-one; January 1st, 1879, forty-seven; January 3rd, fifty; January 4, forty-seven. Total, 265 Snipe in five days, the best week I had that season. Fifty-five of these birds weighed 16lbs., or an average of $4\frac{3}{8}$ oz. a piece, and this after three weeks' frost, when Snipe in other parts of Ireland were starving. In 1879, on January 8th, I bagged forty Snipe, which weighed together 12lbs., or very nearly 5oz. apiece. On January 13th, of the same year, the bag was sixty Snipe; January 14th, forty-one Snipe; 15th, forty-five; 17th, forty-one; 18th, fifty-four; or a total of 241 for the five days."

To this interesting record of sport, Colonel Pey-

ton adds :—" The magistrates of Kerry have recommended the open season for Snipe-shooting to be extended until the 1st of March. I think both Cock and Snipe-shooting should end on the 10th of February ; for even before that date the birds lose their condition and have commenced pairing. I have frequently heard Snipe bleating during the first week of February."*

The Hon. E. De Moleyns has favoured me with the following notes from his game-book, showing the excellent sport he has had with Snipe on the Ventry estate, near Dingle, the property of his brother, Lord Ventry. In ten days' shooting in February, 1861, he killed 363 Snipe. In 1866, on March 9th, he fired thirty-one shots at Snipe and bagged twenty-seven of them. On January 28, 1867, he killed ninety-seven Snipe between 10 A.M. and 3.15 P.M., shooting twenty-two couple in the first two hours, and on February 2nd of the same year he closed the season with a bag of 105 Snipe to his own gun. Mr. De Moleyns, Colonel Peyton and Captain R. Denny are, *par excellence*, the crack Snipe shots of co. Kerry.

But Snipe are not so plentiful now in Ireland

* While referring to the excellent bags made by Colonel Peyton in Ireland, I trust I may be permitted to mention an interesting souvenir presented by him to a gamekeeper on the estate of Lord Ventry, in Kerry, in remembrance of a remarkable day's shooting which he enjoyed on that property in December 1871. The souvenir referred to is a handsome knife, on which is engraved the following inscription :—On one side, " From Col. Peyton, 7th Dragoon Guards, to A. Thompson." On the other side, " In remembrance of a good bag made by Col. Peyton on Lord Ventry's property, 11th December, 1871, viz., two Wild Ducks, four Teal, three Plovers, three Hares, and fifty-one couple of Snipe."

as they used to be.* There are not only more shooters, but loading is so quick and easy to what it was that the birds have not the same chance they had in the days of muzzle-loaders. A Snipe or Cock can scarce rise before a shooter without a chance of being brought down. There is no such thing now-a-days as being unloaded; the birds cannot get away between the shots as they used in times gone by. In non-migratory birds, such as Pheasants and Partridges, quick firing is a small matter; it is merely necessary to hatch out a larger number of eggs in one instance, and to spare the birds in the other. In wild game, such as Cock and Snipe, it is very different. You can't get their eggs; you are not inclined to spare such transitory visitors—who would?—and no care or money can replace them. I am sure, therefore, the paucity of Cock and Snipe in Ireland is due to continued shooting with improved weapons. Then, again, Ireland has been visited of late years by two or three most unusually hard winters, which drove Cock and Snipe to the coast, where they became an *easy prey* to every prowling peasant with a gun—and who has not one?—unhappily, in this country, sometimes used on other than lawful objects of pursuit, worse luck! Snipe

* A gentleman who died at a great age last year often described to me how that, in his young days, Stephen's Green, Dublin, now so tastefully laid out with flowers and walks, was a sure find for a couple or more of Snipe, and now and then even a Wild Duck or Teal, and that, when studying law in his lodgings near at hand, he had often snatched up his gun and walked over the marsh as a relaxation, and so added a dainty to his dinner. He used to tell with emphasis how mighty hard it was to kill a Snipe with a flint fowling-piece, and to keep it pointed straight at the twisting bird whilst the priming was hanging fire.

inland are persecuted with nets, snares, and even traps. If severe frost sets in they are knocked over with sticks, and are then worthless.

During the last hard winter in Ireland (1881), the fishermen, not to be outdone by the fowlers, brought out their herring-nets, and by dragging them at night over the unfrozen spots, captured large numbers of Snipe. I have known of fifty being hawked round the country for sale, after one such night's work, at a penny apiece, the result of a single net. The game dealers being overstocked with Snipe in wretched condition, and unable, in consequence, to dispose of them, refused to purchase any more from the fowlers, who then offered them round the country at threepence a dozen, or whatever, in fact, they would fetch. Long will Ireland, and especially the counties of Kerry and Clare, feel the effects of such indiscriminate slaughter.

The first great destruction of Snipe in modern times was caused by the famously severe winter of the Crimean War, 1854-55. Snow then lay a foot deep over Ireland for eight weeks. When the thaw came at last, the skeletons of innumerable Snipe were to be seen strewn over the country. The hard winter of 1878-79, and the much severer one of 1880-81, have still further damaged the Snipe-shooter's sport.

Though Snipe have diminished so greatly in Ireland within the last score or more of years, other wildfowl, that do not breed to the same extent, have not, excepting Quail and Bitterns. The former of these were almost common not so long since. In county Mayo ten to twelve couple of

Quail was nothing unusual in the memory of many sportsmen now living.

SABINE'S SNIPE, at one time supposed to be a distinct species, but now generally regarded by naturalists as only a melanism of the Common Snipe, has not unfrequently been met with in Ireland. A dozen or more instances of its occurrence have been recorded, and I have notes of three Irish-killed specimens which I have personally inspected.

THE SOLITARY or DOUBLE SNIPE (*Gallinago major*) I have flushed and shot several times in Ireland. It is not particularly rare, but its general similarity to the common species doubtless causes it to be overlooked. Mr. Harrington, the well-known Snipe shot of Tralee, informs me that he has killed eleven in ten years' shooting. As compared with the Common Snipe, it flies sluggishly, and without those turns and twists which make the other bird so difficult a mark when on the wing. It may always be recognized by its larger size, comparatively weaker bill, and by its having the whole of the under parts spotted, instead of white, and the outer tail-feathers on each side pure white.

THE JACK SNIPE (*Gallinago gallinula*) is rare now in Ireland, compared with what used to be the case before the recent hard winters, but its comparative scarcity is no great loss to the shooter. One Jack to a score of Common Snipe is now about the proportion in which they will be met with; and I have even brought home of late seasons fifteen couple of the latter without having obtained, or indeed seen, more than one or two of the former. Jack Snipe

are nearly always plump, their quiet habits accounting for this. Jack Snipe never nest, that I heard of, in Ireland. That they do so, however, is quite possible, for I have several notes of their being seen in Ireland during the summer months.

I find Jack Snipe are becoming scarcer every year in Ireland. Upon this subject Colonel Peyton writes to me as follows :—

“ 1882.—My experience of Snipe, Cock and Duck shooting in Ireland goes back to 1848. At that date, in the counties of Mayo, Sligo, Roscommon and Leitrim, Jack Snipe were at least twenty per cent. more numerous than they have been since 1860. This I attribute to breech-loading guns, for when I was a boy no one troubled themselves about ‘Jacks,’ the full Snipe were so plentiful. It was a common expression then among shooters, ‘I never shoot a Jack.’ Now I never let a Jack off, if I can help it, and have not spared them for ten years past. I prefer them for the table to full Snipe when in good condition and large, as they usually are in Kerry. Four or five years ago in that county my daily bag might be fifty or sixty Snipe, and perhaps not more than four or five Jacks out of that number. I should even now say that two Jacks to twenty-five Common Snipe would be the average proportion throughout the season. The day I killed the 105 Snipe, before alluded to, there were only four Jacks in the bag.

“ In former days we never thought of marking any Snipe down; *now* I turn back a quarter of a mile to a marked bird, whether it be Jack or Common.

“ Three years ago, in December, I killed *eighteen* Jack Snipe in *one day* in a sedgy, shaking swamp in the middle of a large red bog. They were all large and wonderfully well-conditioned birds. I could never understand *this* day’s sport, for the like never happened to me before or since. I have always observed that Jack Snipe frequent swamps and marshy places in preference to the open red bogs and mountains ; also that they are not influenced by the changes of the moon like Common Snipe. The marshes and swamps are usually drained, whilst the bogs and mountains are not. In my younger days poachers could kill only wild ducks sitting on the water and hares in their forms ; *now* they can shoot Snipe and Cock flying, and hares on foot as well as any gentleman.

“ By the way,” says Colonel Peyton, “ what has become of all our Irish Quail ? We never see one now. Years ago I could always kill five couple of these birds when Snipe-shooting by merely trying the dry fields close to the bogs. They were large plump birds too, far superior, in my opinion, to those I have shot in either India, Africa, or Sardinia.”

A springe* for taking Snipe, Woodcock, and other

* In the eastern and southern counties of England these snares are used by poachers, who set them in the sandy spots of the fields where Partridges scratch and dust, and take whole coveys thereby. For hares they set a wire noose tied to a stick by strong cord, and place edgeways to the ground a small twig supporting it in the proper position, that being two fists high for a hare, and one for a rabbit. To find these snares, never search close along the bottom of a hedge-row near the runs. If so set, it is by some bungler, and will catch nothing ; though, of course, it may be watched to see if the owner pays it a visit. The accomplished poacher sets it quite two feet from the hedge. He knows that a hare always canters up, and pauses a

wildfowl, often used in Ireland, though scarcely lawful to describe, is not only a very effective means of capture, but is extremely simple in its construction. It is made as follows :—

Stick a pliant wand of a yard and a half in length firmly into the earth ; bend it down till the ends of a short cross-stick attached to it, and which may be four inches long, catch (as shown in the woodcut) in the notches cut to receive them in two stout pegs driven firmly into the ground, and showing a couple of inches above the surface. Pass the fine wires that are attached to the cross-stick over a slight nick in the top of each peg, and place the running nooses flat on the soil for Snipes, edgeways, as in sketch, for Ducks. When a bird is snared, the little stick between the upright is freed at once, the wand flies upwards, and the victim is strangled.* This is all done so quickly and quietly that the captive is not missed by his companions, though he dangle above them. By increasing the strength of the springe Ducks and Teal may be taken with it ; and I have known half a dozen Ducks to be found strung up by the neck all of a row in the morning. Traps, fish-hooks, and ordinary snares are never successful with wildfowl unless they can be arranged as above, for a struggling bird will at once terrify all

yard or more away from the fence, and then springs into the hedge bottom, as if to look through before passing on, and it is in the act of jumping that she is taken. If a hare has been thus captured, and the noose and peg removed, a trodden circle will be seen at the spot, should the ground be damp, beaten down by the animal's feet in its violent attempts to escape.

* A modification of this snare, somewhat differently set, will be found described and figured by Mr. Harting in his "Ornithology of Shakespeare," p. 229.

the others near, and they fly off in alarm and shun the locality in future, the first being most likely the only one caught.

THE WOODCOCK (*Scolopax rusticula*), though com-

SPRINGE FOR SNIPE AND WOODCOCK.

mon enough in Ireland, varies greatly in abundance in different years. During the unexampled frost of January, 1881, they positively swarmed on the coast. To my knowledge, peasants out of work and farmers' sons, with old-fashioned muzzle-loading

guns, converted rifles, and Russian muskets,* bagged their fifteen couple a day; the best shots among them getting from fifteen to twenty couple. These fellows often ran short of ammunition, or, as they told me, would have accounted for many more. Every hedgeway, every ditch and bunch of furze, held its couple or so of Cock; about the cliffs a dozen might often be seen on the wing at once, and this in a single district where I happened to be coast shooting, namely, on the shores of Clare. This slaughter continued during the greater part of January. For an entire week Woodcock might have been bought at from fourpence to sixpence a couple; Snipe a penny apiece. One dealer alone in the neighbouring town, though he had two rivals in the trade, forwarded to Dublin and London a thousand Cock a week for three weeks. I counted laid out on benches eight hundred Woodcock in rows—a sight not often to be seen. Nor did this massacre take place in one county alone. From every part of the Irish coast came the same story.

* These "Rooshians," as they are called in Ireland, were sold after the Crimean War, in which they were taken, by the Government. They were, and are, esteemed very highly by the poor fowlers, as wildfowl guns. They are long stout-barrelled pieces of good range, and excellent though coarse manufacture. They take a full charge—an ounce and a half is usual—and being strong and heavy, stand well the rough work they are put to. I have seen many in use in Ireland, and have sometimes even come across a French musket that was, I presume, *left behind* by the French when they attempted to invade Ireland. These were also held in great reputation for many years, and not long since I saw one hanging up over a farmer's fireplace in co. Mayo, that had been in constant use throughout the century. A Spanish barrel was formerly of high value in Ireland, and it is recorded of the governor of a certain Irish fortress that he fled by night, taking with him what he prized most—his wolfdog and his Spanish gun.

It is a common error to imagine that Cock, like Snipe, will soon lose their condition in frost. The latter in a week will become, if frost be severe, mere skin and bone. Out of hundreds of Cock that I examined during the month above referred to, perhaps only a dozen were small and poor birds, the rest were plump and handsome. I often inspected those shot and exposed for sale, and at the end of the hard weather there was but little appreciable difference in their condition. At the end of the frost I picked out three birds amongst a number of fresh killed ones, each of which weighed exactly sixteen ounces, and a fourth which weighed eighteen and a quarter ounces. I may safely say that over five thousand Woodcock were brought into one small town in co. Clare during the frost that held with such vigour for three weeks in January, 1881. Countrymen bearing sacks of Woodcock on their backs, on their way from the coast where the birds had been killed to the towns, was a sight I many times sadly viewed. They were actually slain that winter with sticks and stones in many parts of Ireland by frozen-out labourers, who had nothing better wherewith to amuse themselves.

To account for the presence of Woodcocks on the western seaboard of Ireland in such large flights in early winter, several theories have been suggested,* the most probable being,—

* Though Woodcock, when they first arrive, often appear in large flights, they will equally distribute their numbers through the woods, ditches, and hedges, day by day feeling their way into the heart of the country ; yet when they visit the coast during hard frost and deep snow, which latter more than ice covers up their food and drives them from inland, they may be seen in batches of four to even a half-dozen

First.—That the birds are driven back by adverse gales, and return exhausted, after fruitlessly attempting to cross the Atlantic.

Secondly.—That they pass over the land till they reach the coast, and then dare not venture farther, instinct telling them that the ocean is no narrow channel, as is the Irish or North Sea.*

That *during winter* the frost is less rigorous near the sea than inland, and that the birds, having experience of this, desert the woods and mountains for the milder climate of the sea-shore and its immediate vicinity, may safely be concluded.

As Cock vanish from their favourite haunts during severe frost, and at the same time appear in plenty on the coast, is a strong argument in favour of the latter supposition; this idea is pretty generally acknowledged. I have often heard inland shooters and gamekeepers remark: "We have no Duck, Geese, or Cock with us now; they have all gone to the coast, and will not return till the thaw." I have many times flushed Cock on the mud-flats, even by day, Snipe frequently. It is probable that they regularly visit such grounds by night, for at break of day, in a frost, I have shot Cock amongst rocks and seaweed on the beach, especially at high water, when it would seem they were driven shoreward by the rising tide. Further evidence of this I have

or more on wing together. When migrating hither in the autumn, they can find food to their fancy everywhere, but during severe weather only a few places are open to them, and in the latter they collect in numbers and rise in company.

* In the autumn I have often remarked that Cock will strangely enough appear on the west and south coasts of Ireland earlier than they do in the north and east.

gained by seeing traces of frozen mud on the bill and feathers of the forehead.

Woodcock, as well as Curlew, will swallow mussels, but not to the same extent. On dissecting those shot from among rocks and seaweed, I have found that they had been bolting whole small shellfish. The appetite of a Woodcock is almost insatiable, and a tame bird in my possession has often eaten before my eyes a cupful of garden worms, and then looked wistfully for more.

Though Cock hide by day, they will flit out at the very hour the fowler is in wait for the evening flight of Duck. Many a Woodcock have I then shot, and they often at this time fly within a few yards of the shooter. They may be seen slowly whirling and twisting like a bat, and totally different to the owl-like flight of the bird when flushed in an open space by day, or to the arrow-like manner it flits round the trunks of trees in a wood.

They leave the woods at that time by well-known airy paths, and so regularly do they adhere to their accustomed routes, that nets are set at certain spots to intercept them as they emerge at dusk, and in these they are caught. So close do Cock creep and hide in bush or briar by day, that I have several times seen them picked up uninjured, unable to run or rise clear in time to escape. I once caught one myself in this way; but it was a mere chance, for I should have passed the bird by had I not remarked its large eye shining among some brambles and dead leaves.

When waiting for Duck, as early in the spring as the 1st of March, I have heard Cock uttering the

peculiar call of the nesting season in a wood hard by, and in which they were known to breed yearly.

Cock and Snipe may be as fairly called "wildfowl" as can Duck ; in fact, all migratory birds are more or less wildfowl for that matter, the only difference being that some are land and others water fowl. But, fortunately for them, they are not all like Duck, Snipe, and Cock, excellent as food.

Woodcock nest yearly in many parts of Ireland. I never saw a Woodcock's nest with more than four eggs, and I think this is the invariable number, as it is with Snipe. Mr. W. Bagwell, of Clonmel, tells me that in 1880, on the 26th of April, he found a Woodcock's nest in Kilmarnack Wood, co. Waterford, with three eggs, and on the 28th another, also containing three eggs, some hundred yards from the one first found. He found four nests in the same spot April 1881.

Mr. L. Patterson wrote to me on the 18th of May, 1881 :—" I have just been asked by the agent to the Marquis of Downshire's estates to go and see a Woodcock sitting on her nest and four eggs, in Hillsborough Park."

Captain A. Morgan informs me that Woodcock nest near Skibbereen, co. Cork, where he lives ; but that the young broods are usually killed by vermin.

Woodcock breed annually in a large wood at Dundrum, the property of Lord Hawarden. The keepers say that hardly a year passes without their seeing broods of young Cock. This wood takes three days to beat, and Colonel Purejoy recollects when it produced its three hundred Woodcock. A gentleman who shot it in 1878 says the greatest

number of Cocks the party got in one day was twenty couple. In 1879 eighty Cock were shot in three days; and in 1880-81 fifty-six were obtained in a day.

Colonel Purejoy informs me that near Cappowhite, co. Tipperary, they had excellent Cock-shooting till they commenced to breed Pheasants, which he considers disturb and drive the Cock away. Since keeping these birds not more than ten to a dozen Cocks have been shot in a day; but in 1878 pheasants were very scarce, and thirty-five Cocks in one day and twenty-seven in another was the result.

Mr. R. Ussher, of Cappagh, co. Waterford, a most careful naturalist, tells me he has himself flushed Cock in July at his own place, and that they breed at Colugan, close by. He adds that Mr. Smith, of Headborough, has seen young broods in the same district. In co. Wicklow, Mr. G. Kinehan notes that they nest freely at the "Meeting of the Waters," Avoca, where they have been seen to flit about on summer evenings, over persons out strolling, the old bird followed by a couple of squealing young ones. According to the keepers, Woodcocks nest frequently in the woods of Britias, Queen's County. Such men have told me they have seen a Woodcock carry off her young, one by one, *supporting them with both feet and bill*, which a Cock could well do, as he always flies with down-pointed bill.*

* This curious habit, extraordinary as it may appear, has been observed by many sportsmen and naturalists, and is well vouched for. The precise mode in which the young are transported seems to vary. They are sometimes clutched up and carried in the feet, sometimes

I have twice seen a Woodcock carrying a young bird, huddled up under the neck, and frequently remarked them at the hours of flight teaching their broods to wheel and sport in the air—a very pretty sight.

I have observed that Woodcock have a curious habit of placing near the edge of the nest a little bank of moss, on which they will at times deposit worms as they bring them, that the young birds may learn to pick them out as they quickly glide from their view.

The plumage of a Woodcock beautifully blends with the colour shown by the decaying foliage of the woods, not only in the darker shades but in the lighter as well; the light streaks on the back of both Snipe and Cock assimilating with the yellow fallen leaves and reeds of early winter.

The wet glistening eye of the bird has several times attracted my attention to a wounded Cock when I could not distinguish the crouching form.

Captain Dugmore says Woodcock nest in his coverts (King's County) yearly. Mr. R. Tuke, of Avoca, having caught a Woodcock in the summer of 1880 in a wood, brought it home in his pocket. On taking the bird out to show as a prize, he found an egg as well that it had laid on the journey.

In co. Kildare, Woodcock breed very freely in protected demesnes. Mr. More O'Farrell, of Balyna, says that in the summer of 1881 his keeper

pressed between the thighs of the parent bird, or supported partly by the feet and partly by the bill. In the "Zoologist" for November, 1879, will be found a very full and interesting account by Mr. Harting of the various modes of transport which have been observed, illustrated with a charming sketch by Wolf of a Woodcock in flight with a young one in her feet.

found twenty-seven nests, with from four to five eggs in each, and one with six, five of which hatched out safely and were able to fly a short distance in a fortnight.* They build chiefly on the edge of a bog. One rotten egg is usually found in the nest when deserted by old and young. Mr. O'Farrell adds, he has seen young Cock frequently, but never so numerous as in 1881. He remarks that the old bird, at the time her brood are very young, will behave exactly similar to a hen Partridge when enticing a pursuer from her chicks. Cock are not seen in abundance at Balyna during the winter, and not more than ten couple have ever been killed there in a day.

Sligo and Mayo are noted counties for Woodcock. Mr. Warren, of Ballina, tells me that in frost and snow the birds desert the inland coverts for the coast, and that when the tide is out they feed among the rocks and seaweed of the sea-shore ; that in the severe weather of 1878-79, and 1880-81, numbers were killed by country boys stalking them from behind rocks and boulders and knocking them down with sticks as they rose. Though frost tames Cock, it does not starve them into poor condition for a very long time, as it does Snipe, which in hard weather soon become worthless.

I will now notice a few good bags of Woodcock made in different parts of Ireland, all of which I

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In Mayo ten to thirty couple is a fair day's sport for a party of six guns. About ten years since forty couple were killed in a day in Lord Sligo's wood, Brackloon, in the above county. Woodcock very rarely nest in Mayo. In severe weather they leave the interior of the country and fly down to the sea-shore, particularly to those parts that project farthest into the Atlantic (Lord J. Brown). In the co. Sligo, Sir H. Gore Booth, who lives on the coast, tells me that during frost and snow they find Cock in large numbers. Some years since, a hundred and fifty couple were killed in three days by a party of eight guns, close round the house at Lissadel. During the last few days of January and the beginning of February, 1867, three hundred and thirty-eight Cock were killed in six days, at the same place, by a party averaging seven guns. The winter of 1878-79, Sir Henry tells me, was a fairly good one in Sligo. Two guns at Lissadel in that year obtained twenty couple in a day; four guns, thirty-two couple, and the next day, thirty couple. The best bag in 1880-81 was thirty-three couple to four guns.

Cork was a very good Woodcock county some years since. Captain A. Morgan says that he was one of a party of four guns that killed one hundred and forty-one Woodcock in four days in 1879, in South Cork. He adds that in 1880-81 he was at the shooting of at least four hundred Cock. He states regretfully that the numbers killed along the coast of Cork by poachers during the great frost of January, 1881, was "incredible."

This profusion of Woodcock on the coast was universal during that month. Near Kilcredan, on the south-west shore of Clare, one fowler, to my own

knowledge, killed sixty in a day. I watched this man start and return, I heard him fire nearly two hundred shots, and saw his bag of fresh killed birds, as I met him on his way home at the day's end, when he counted them out before me. I was fowling along shore at the time, and the shooter was in my view most of the day. But though Woodcocks were then swarming along the coast, there were very few indeed to be found inland; for, as I have before observed, when Woodcock appear on the coast during a hard frost, they are not strangers, but merely visitants from the inland districts. How in early winter they are found in flights near the shore, I have elsewhere attempted to explain. Cock appear so suddenly, and in such abundance at times in autumn, and become so scarce as it were in a day, that although their movements are apparent, the cause seems inexplicable. The year Lord Elcho resided at Muckross, Killarney, the party, averaging five guns, shot in ten days four hundred and twenty couple of Woodcock (840 birds). In that winter (1863-64) there were killed twelve hundred and fifty Woodcock; and Lord Elcho shot to his own gun in one day twenty-five couple. Since then Mr. C. Balfour and Mr. A. Herbert shot in one day thirty-seven and a half couple at the same place. In these covers another year thirty-eight couple were killed by the Duke of Roxburgh in a day. There were shot on two consecutive days, a few years ago, in Tomies and Glenflesk woods, Muckross, one hundred and sixteen couple (232 birds). I learn from Mr. H. Herbert of Cahirnane that Woodcock now breed in considerable numbers round Killarney.

In co. Cork five hundred Woodcock have been

shot at Castle-Martyr (Lord Shannon's) in a season. From three to four hundred Cock is, however, a good yearly average on a favoured estate in Ireland; but in exceptionally good seasons this number may be nearly doubled.

The Cock-shooting at Ashford, co. Galway, is among the most famous in Ireland, and the owner, Lord Ardilaun, has kindly given me the annexed details from his game-book, as exemplifying some of his best days' sport.

Jan., 1878—five guns, 106 Cock in one day. Jan., 1879—six guns, 350 Cock in one week. On the two best days of this week there were killed respectively 117 and 115 birds. Jan., 1880—six guns, 365 Cock in four days. One day 165 birds were bagged, on another 82. Jan., 1881—six guns, 173 Cock in two days.

I will conclude these notes on Snipe and Woodcock with the annexed list, which, although relating to wildfowl in general, refers more particularly to Snipe and Cock. Messrs. McCowen, the respected merchants of Tralee, have kindly permitted me to compile it from their books, in which every bird is named and noted, together with the sum paid for it, and the receipt of the English game-dealers for the same on arrival. The large total, it may be observed, represents the shooting by the peasantry and professional fowlers over a great part of Kerry during the winter of 1880-81. It is the result of an unexampled season as regards the number of birds killed, which the following winter's sport (1881-82) suffered severely from. The hard weather of January, 1881, lasted nearly the entire month, and it will be

seen by the list how the Snipe were victimized in consequence.

In the season referred to, every other peasant owned a gun, and used it night and day, for during the frost they had no other occupation, the land being unworkable for the time.

Name of Bird.	15th of October to 30th of November, 1880.	December, 1880.	January, 1881.	February, 1881.	Total.
Woodcock . . .	185	195	1,142	499	2,021
Snipe	1,896	1,061	5,437	870	9,264
Golden Plover .	490	80	463	19	1,052
Green Plover .	139	50	190	4	383
Duck	23	13	201	60	497
Wigeon	282	409	906	254	1,861
Teal.	43	26	364	32	465
Curlew	272	90	445	32	839
Redshank . . .	19	6	15	1	41
Oyster-catcher .	2	9	—	—	11
Waterhen . . .	9	5	16	13	43
Grebe	2	—	—	—	2
Rail	2	—	—	—	2
Partridge . . .	58	30	46	4	138
Grouse	28	9	4	—	41
Pheasant	14	27	29	3	73
Total Wildfowl					16,481
Other Species					252
					<hr/> 16,733

Messrs. McCowen, already named, received the greatest number of Snipe in one day on Saturday, January 24th, 1881, when 856 were bought from the peasantry; the result, of course, with most of these men, of the week's shooting.

Under the head of "Duck" are included Pintail and Diving Ducks as well as Brent Geese, which, called Bernicle in Kerry, are sold as Duck. The Wigeon were chiefly killed by the punters along the coast, or from sailing boats; the Plovers by the netmen up to the date of the frost, during the commencement of the hard weather by the coast gunners, as the stands then visit the sea-shore for a few days ere quitting the country for other climes more genial. In the hard weather, Curlews in a starving condition sought the rivers and springs, and were easily killed by the numerous gunners.

Though I have returns for the season 1880-81, from several tradesmen who traffic in game, from the different counties of Ireland, in one only (co. Clare) does it appear that a dealer bought a larger number of Cock and nearly as many Snipe in a season as Messrs. McCowen of Tralee. But I cannot absolutely vouch for the correctness of these returns, as I *can* for the list above given.

It must be borne in mind that, in addition to the numbers quoted, are the Snipe and Cock shot by the gentry of the county on their preserved estates, which do not find their way to the market, as well as the birds that are sent out of the country districts by local buyers, of which there is usually at least one in every small town throughout the county.

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haunts. They are shy and restless birds, and other fowl avoid associating with them for this reason. It is only under rarely favourable conditions that a heavy shot can be made at Curlews, most frequently at break of day or near dusk. The time chosen to approach them should be about high water, for, when driven from their feeding grounds by the rising tide, they will form up in dense packs on some flat-topped island or point; there they will rest and, by vociferous calling, collect their scattered forces ere flying inland, or to isolated rocks, where, motionless, they await the ebbing tide. At such times they are apparently perfectly silent, and choose a point of vantage from which they can see all round, and are secure from hidden attack. But when within shot of a large number of Curlews it will be remarked that they often keep up a subdued piping, scarcely audible unless the shooter is very near them. The grey of dawn, if the tide be high, is a good hour to look for a shot; but it is then hard to see these birds till they flit away like shadows, crying noisily when out of shot. Though previously they may have been in hundreds on the ground, their colour blends so confusedly with the land in the dusky light, that it is no easy matter to discern them in time to fire ere they rise and leave. Following Curlews by day is usually a waste of time; they cleverly judge a long shot, and a few yards to spare. Solitary birds will often fly within easy range, and seem to lose their cunning when in search of companionship. They vary greatly in size, and I have shot adults (even females, which are usually the largest) no heavier than young birds.

Should there be little chance of fowling in prospect, shoot a Curlew, *if you can*. If slightly wounded, he will prove a good decoy at all times, and may be kept for that purpose. Fasten him to a peg in the ground and, while you are hidden yourself, he will attract by his calls any other Curlews feeding in the neighbourhood. These latter will now and then look up as if listening, and then desert the adjacent flats or marsh to pay a visit of curiosity or condolence to the noisy captive. As they fly, swooping by, they will afford excellent shots from time to time.

Though Curlews are common on the coast and its oozy flats, they are not near so frequent inland. Their bill being adapted for feeding on soft ground accounts for their preference to the mud of estuaries and harbours. A solitary Curlew, as is the case with a Heron, is seldom flushed from behind a bank ; you will as often as not see his head and bill showing over the very eminence you intended creeping to for the chance of a shot on the other side. His large, quick, and soft eye (he rivals the Plover in this respect) has spied you long since ; but he will not move, on the mere chance of your passing by unobservant of his statue-like form. When he becomes aware that you are conscious of his presence, he hurriedly departs.

Many writers affirm that wildfowl choose the companionship of Curlews, trusting to their vigilance to give due notice of danger. This pretty idea, so far as *my* experience goes, is quite erroneous. I have noticed that wildfowl rather shun the society of Curlews. I do not think that Ducks would ever

feed happily with such noisy, restless neighbours ; they would be continually alarmed by their cries and uneasy movements, and trust rather to their own watchfulness, which is good enough to puzzle most of us. I never saw Ducks pitch near, or with Curlews, but I have seen the latter alight amongst the former. Being seen together may account for the popular notion just referred to.

Should Curlews alight near fowl the latter cease to feed contentedly, and will stretch their necks and appear unsettled. When the former discover that you are too near to be pleasant, up they get (out of shot, you may be sure) with loud screams, and, of course, take with them all other birds in the vicinity. It is for this reason these wary birds are supposed to be chosen by others as sentinels.

Many Curlews, not breeding I presume, remain on the coast during the summer, and do not migrate or fly inland to nest when their companions leave the tide for that purpose. Some may visit the shore at leisure, but the majority of those seen about the flats in summer only leave the ooze to wait on convenient rocks and points during high tide. No birds sit prettier for a heavy gun, when driven from or awaiting the exposure of their food. They stand so thick and still, and carry their heads so high and prominent for a charge of shot from a big gun, that they are apt to tempt the fowler from worthier game. Captain K. Dover told me he once got forty-seven at a shot in the estuary of the Moy.

The note of the Curlew is the most ear-piercing of all cries familiar to a fowler. The sound is deafening when the bird rushes suddenly past within

a few yards in the dark, and can be heard an immense distance, at least two miles, on a still night. When busily feeding, or holding parliament among themselves, the note is a rough grating croak, almost startling from its peculiarity, and yet very subdued in comparison to the bird's usual shriek of alarm. Curlews do not appear to possess that acute sense of hearing which their powers of sight and smell would lead one to expect. I have several times crept up unnoticed within thirty paces of Curlews from behind a bank or hedge; an experimental cough or whistle, not unreasonably loud, did not alarm them, and the crack of a match was also disregarded, but the first whiff of tobacco and they were off in dire confusion. Their sense of smell and touch, as in Snipe and Woodcock, is most marvellous, and equally perfect is their vision. To know that these birds can plunge the bill, inches deep, into mud or sand, and pull up worms by the score that they cannot see, is to learn the perfection of uncertain sustenance. The bill of a Curlew is a mere bundle of delicate nerves of the most sensitive order, enclosed in a thin skin; but their mode of obtaining food varies, for I have taken out of the gizzard of a Curlew a large handful of cockles, swallowed whole, as well as the small heath snail (*Helix ericetorum*).

A white Curlew, as well as a black one, now and then occurs. Mr. Neligan, of Tralee, has one of spotless white in his collection that was shot in co. Kerry, and I have a black one that was killed in Galway Bay in 1877. The latter was sold as an Ibis, which, however, it is not. Though many

freaks of colour may be seen in birds from time to time, it is seldom the unusual shade is a uniform one.

As already remarked, Curlews are not good eating on the coast, and will often be found covered with parasites. Like Plovers, they abhor a fox, and during the nesting season will, partly from hatred and a little from curiosity, flap over and follow any animal or dog that bears a resemblance to their natural enemy. A red setter is sometimes trained, by circling gradually round, to lead these birds within range of the fowler's gun. Duck, as already remarked in the chapter on Decoys, will in the same way follow a fox, or rather what they suppose to be one.

I have many times seen Curlews so favourably placed on small level islands in the estuaries of Ireland, that had it been possible to get near enough to put a charge into them, a hundred, at least, would have been killed; but whether these birds are worth pursuit is, after all, a matter of opinion.

THE WHIMBREL (*Numenius phæopus*) is common to every part of the Irish shores in spring and autumn, and especially so to the westward. During the month of May, when it appears most numerously, from which circumstance the bird derives its name of "Maybird," I have seen a score together. I have shot them also in autumn not rarely, but never, to my recollection, near or after Christmas, save, perhaps, a very occasional bird. I have been unable to obtain any evidence of the Whimbrel breeding in Ireland, though I have been always on the look-out for such an occurrence.

THE GLOSSY IBIS (*Ibis falcinellus*) is an acci-

dental straggler that now and then drops on the Irish coast. I have notes of five shot within a few years, and old fowlers have told me that they knew them well as "black curlew" in years gone by. The plumage of a recently killed specimen is a beautiful shade of shadowy black-green. It soon fades, but for some time resembles in its metallic sheen the body of a large fly or beetle.

The Ibis was said to be not a rare bird in England and Ireland some forty years ago, and I have notes of eight having been seen together on the Blackwater, co. Cork. But, in my opinion, any bird that is still as common as ever abroad would be just as likely to occur in our latitudes now as then; were it becoming rare in other countries, it would be a different matter.

As to GODWITS, the Black-tailed species (*Limosa ægocephala*) is rare in Ireland, but the Bar-tailed Godwit (*Limosa lapponica*) is fairly numerous, although not in the south to the same extent as, for instance, the Whimbrel. In the north and east I have seen fifty together; and Mr. Warren tells me that on the Moy estuary he has obtained over thirty at a shot, and that he remarks every year how late they stay into the summer; adding, he once saw fifty together on the sands in the first week of August.

THE AVOCET (*Recurvirostra avocetta*) is a rare species in Ireland, and I have only shot one. I saw this bird wading up a shallow creek. It was in full view, and I was well able to note the curious "one step forward and sweep of the bill sideways on the bottom," as the bird sought its food. I have, however, records of quite a dozen obtained within a

few years. A pair were seen at Brandon Head, co. Kerry, in 1880, by the coast-guard, who remarked on their bills being turned up the wrong way. This pair remained all through the year, and were constantly seen, but with the most careful search no trace of nest or eggs could be found. Mr. Warren tells me he obtained a pair in 1875 at Ballina; and Irish-killed specimens are to be seen in every collection.

Sandpipers of various kinds are very common to the shores of Ireland. The Dunlin (*Tringa alpina*) may be seen in tens of thousands, the Redshank (*Totanus calidris*) singly and in small numbers everywhere, flying to and fro; now feeding, now standing on the water's edge, nodding and bowing—a movement for which I could never see the reason. At their own reflection it cannot be, for they will act similarly on the shingle.* They are a pest to fowlers, and spoil many a shot, alarming the fowl at the wrong moment with their shrill cry, that sounds a note of warning far and near. It is not that they are naturally timid, for they may be often noticed running about and searching for their food within a few yards of your punt as you shove along. At night they stalk about like shadows, sometimes within an oar's length. Their disposition is most restless, and it is the habit of this bird to remain but a short time in one spot, and on the wing to call loudly. This they will do when near or far, whether frightened or unsuspecting.

* All wildfowl will nod and jerk the head, especially Pintail, as the nesting-time draws near; but the bowing motion peculiar to the Redshank is habitual at all seasons.

THE GREENSHANK (*Totanus canescens*) is not uncommon about the harbours and estuaries in spring and autumn, and its peculiar whistle may be often heard, especially by night. It is occasionally met with in winter. On the sea-shore in the neighbourhood of Clew Bay, co. Mayo, Greenshanks are rather numerous.

THE SPOTTED REDSHANK (*Totanus fuscus*) is very rare, though I have records of half a dozen shot of late years in Ireland. The note of this bird is striking, and it was thus my attention was called to the only one I ever obtained. Mr. Robert Warren, of Ballina, shot one of these birds in the Moy estuary in January, 1867, and it is now preserved in the fine collection belonging to Cork College. In October, 1876, he obtained another in the same estuary. The latter, which has also been preserved, was in a state of plumage intermediate between that of summer and winter.

THE GREEN SANDPIPER (*Totanus ochropus*) is not very uncommon as a spring and autumn visitant. Mr. Longfield, of Bandon, informs me that it is not unfrequently met with on the Bandon River. Mr. Williams, the taxidermist in Dublin, reports that he always receives a few every year in September, October, and November.

THE COMMON SANDPIPER (*Tringoides hypoleucus*), as its name implies, is well known and generally distributed. The Spotted Sandpiper of America (*Tringoides macularius*) I have never seen or obtained, but Mr. Reeves, of Capard, Queen's County, tells me he has a specimen in his collection which he shot in Ireland in 1873—the only

one he ever procured, or indeed heard of, in this country.

THE KNOT (*Tringa canutus*) is also a common bird, especially in spring and autumn, when it may be found in large numbers along the coast, and in the tidal harbours and estuaries. Some remain all the winter. I once killed one hundred and sixty Knots on a sandbank at a shot with my big gun, having mistaken them on a dark evening for Plovers.

THE CURLEW SANDPIPER, or Pigmy Curlew, as it is sometimes called (*Tringa subarcuata*), is rather a rare bird in Ireland, though from its general resemblance to the Dunlin, when at a little distance, it perhaps often escapes notice. It stands higher on the legs than a Dunlin, and may be always distinguished when flying by its white upper tail-coverts. The bill, too, is somewhat longer, and curves slightly downwards like that of a Curlew. I have seen from five to eight together on the east coast, and never found it difficult to procure a specimen when wanted.

Mr. Williams, the Dublin naturalist, tells me that Mr. Millar, of Grafton Street, when out shooting on the Dublin mountains, fired into a number of Pigmy Curlews flying past him, and dropped eight, which he (Mr. Williams) preserved. Ten years since Mr. Williams says he received from Dr. H. L. Cox nine Pigmy Curlews, and four LITTLE STINTS (*Tringa minuta*), each species killed by a shot from either barrel of a double gun, and at the same time. Since then no specimen of the Little Stint passed through his hands till September, 1881, when he obtained three from near Clontarf. The Pigmy

Curlew is not at all uncommon, Mr. Williams says, near Dublin Bay, but then only in the month of September.

THE RUFF (*Machetes pugnax*) is another wader that appears the same month (September), and has been occasionally sent to Mr. Williams, for preservation, from north, south, east and west.

THE SANDERLING (*Calidris arenaria*) is obtained very late in Dublin Bay, even to the last week of May. Dr. H. L. Cox sent Mr. Williams ten, in the spring of 1878, all in full breeding plumage, and obtained at one discharge. Though far from common, it is not in my experience a rare species in Ireland.

THE GREY PHALAROPE (*Phalaropus fulicarius*) is rare. I never personally met with more than three in Ireland, two of which I shot. I was watching some Redshanks and Sandpipers feeding greedily on a tiny spot of ooze that was fast being covered by the flowing tide. At length these were in danger of being swamped and had to quit. But I noticed two small birds remain and swim over the spot when their companions had flown.* On pushing nearer they rose and flew, when I shot both, and at

* All birds that wade, even Cock and Snipe, can swim fairly well on an emergency, and even dive, or I would rather say sink, as they can travel but poorly under water, having no webs to their feet to force them along. Plover can swim well, the "Golden" especially. But all the species have the power of floating buoyantly on the surface when wounded and fallen therein. I have even seen them rise with tolerable ease after recovery from the blow of the shot. This power is often of great service to them, but it is only in calm water they can float and swim dry. When soaked they cannot rise, as the smallest waves will rumple and so penetrate their plumage; but after a voluntary submersion I have seen them do so.

once saw, from their narrow flat shanks and partially webbed feet, that they were swimmers, though I knew not of what species, till I reached home and sought them out by reference to books. I have, however, notes of fully a dozen obtained in Ireland of late years.

THE RED-NECKED PHALAROPE (*Phalaropus hyperboreus*) I never met with in Ireland.

THE PURPLE SANDPIPER (*Tringa maritima*) is not uncommon, and in some districts is even numerous. They are very tame. You may pelt them with stones and they will not rise, but merely trot farther off. It is curious to see them running about or sitting huddled up on the rocks, at the verge of a lashing sea. Each wave looks as if it must overwhelm them; but no, they judge their distance to a nicety, or stick like limpets to the rock, amid the spray and foam.

THE TURNSTONE (*Streptilas interpres*) is not common, although I have more than once seen from eight to a dozen together, on the coast, in the autumn—oftener but two or three.

THE OYSTER-CATCHER (*Hæmatopus ostralegus*) may be seen in numbers varying from ten to a score together, and at a distance, when flying, bear a strong resemblance to Wigeon.

CHAPTER XIII.

Marsh Birds—Hérons, Bitterns, and Rails.

THE HERON (*Ardea cinerea*) is well known in Ireland, and may be seen everywhere, by the lonely mere or by the sea. Near the tide they are abundant. All along the shore they stand knee-deep fishing. Eight to ten is no unusual number to see on the wing at one time. They nest freely and in every suitable locality ; trees near the water, or at no great distance, being most often chosen. They will even build on the ground. Mr. Kinehan, an observant naturalist, informed Mr. Ussher, of Cappagh, that on an island in a lake, in Garomna Island, off co. Galway, there exists a heronry of fifty nests among *Osmunda* fern, on the ground, and that there are no trees in the neighbourhood for them to build in. This gentleman also notes a somewhat similar case, a large rookery close to the ground, on an island in a lake in the parish of Tousist, north-east of Ardee village, co. Kerry. The nests are built in low scrub bushes. It is a common habit for Herons when on the eggs to leave their legs hanging outside. Mr. Longfield, of Bandon, informs me he constantly remarks the Herons that build near his place, and says, "The old birds often add to the nest after the young ones are

hatched, and that as the nest is so small when the eggs are laid, if this were not done the broods would fall out, as they remain in the nest a long time after their first appearance."

A Heron when seeking food stands like a statue ; his long legs enable him to wade out from the bank, where the water is shallow, into a good position for obtaining fish. When he moves along the shore from one place to another, he lifts his legs with the utmost silence and hesitation, poising each foot in the air ere placing it down, as if he were a slider feeling his way on thin ice, or a pointer drawing up to partridges in turnips.

The feet of a Heron are so soft and limber that he can stand anywhere on anything ; his toes bend round a stone or amongst sticks as a starfish clings to a rough rock. On seizing his prey, if a fair-sized eel or fish, he rarely bolts it at once, as will a seagull, but solemnly stalks to the shore, and laying it down, regards it for a few seconds ; if struggling, he beats it against the ground, then takes it head first. A Heron will prey upon birds and small animals. I have known them pick both young Ducks and Waterhens out of the nest, the parents helpless to defend their progeny against the sedate plunderer. A Heron is a slow mover, and could never follow a mouse or bird, but stands so still and looks so inanimate, that they often come within his reach. He then never misses, and calculates the range of his stroke to an inch. He seizes with the very point of the bill ; then slides the fish up his beak by raising the head, runs it down again, after one vicelike squeeze, to the ground, or, if small, turn its head to-

wards him, and gulps it there and then. If a dry fish be given him, and water is at hand, he always wets it ere gorging. If he cannot do this it will remain half way down the throat for some time, or till he can take water. I have placed live trout in a very shallow glass dish, with just sufficient water for them to swim in. The Heron, though now and then darting his bill like lightning to obtain the food, never strikes the bottom of the vessel, though but two inches depth of water be in it.

It is a common idea that a Heron, when chased by a Hawk, will, as the latter strikes at it from above, point its long bill towards the foe, as a soldier with his bayonet; but falconers tell me this rarely if ever occurs, and they never knew the Heron to act thus on the defensive; but I have seen a Heron, when chased by a Peregrine, disgorge one fish after another to facilitate escape. Those piratical rascals, the Hooded Crows, will follow a Heron for miles as he returns from feeding, and is on his way to the tree he sleeps in. They dart on all sides, teasing and bullying him till he disgorges the fish or eels he has so patiently waited for by the water-side, and which they catch up ere reaching the ground. The Heron never retaliates; he is too slow to do so, but twists and flaps along his course in evident disgust.

As an instance of the voracity of the Heron, I may mention that in September, 1881, I obtained from my fisherman a common Heron, a young bird of the year, which he had just captured on the river Blackwater, co. Cork. It was in a very exhausted condition, and had about

two inches of an eel projecting from the mouth. On relieving the bird of its prey it recovered. The eel weighed seventeen ounces and measured twenty-five inches in length. This Heron has subsequently become very tame, and stalks about the poultry yard, but is rather fierce to his companions. When unable to supply him with trout, he is fed on salted sprats, which he always washes well in a pond ere swallowing. He rests like a Puffin or Guillemot, on the entire length of the tarsus, slowly sinking into this attitude from time to time.

THE NIGHT HERON (*Nycticorax griseus*) is a rare visitant to Ireland, but occurs now and then. A fine specimen, preserved by Mr. Rohu, of Cork, was shot on Lord Shannon's estate, near Youghall, on May 16th, 1877. Five instances of the occurrence of this bird in Ireland (one of which Mr. Glennon preserved) have come to my knowledge since 1877.

THE SQUACCO HERON (*Ardea comata*).—When Thompson published his work on "The Birds of Ireland," only one specimen of this bird was known to have occurred in Ireland. This was shot in Killeagh Bog, Youghal, in May, 1849. Since then another has been met with, also near Youghal, and is now preserved in the Museum of the Royal Dublin Society. Mr. A. H. Bowles, of Guildford, sent me word that in June, 1875, he shot one of these birds in Kerry, on the river Laune, an interesting fact which I find has been recorded in *The Zoologist* for 1877, p. 57, in which volume I also find (at p. 388) a notice by Mr. Williams of another Squacco Heron, obtained at Castle Bernard, King's

County, in July, 1877. Lord Carberry has a fine specimen of this bird, which was shot by his keeper near the lake at Castle Freke, co. Cork, on the 15th July, 1879.

THE PURPLE HERON (*Ardea purpurea*) is only known to have occurred once in Ireland. This specimen was procured so long ago as 1834, at Carrickmacross, as recorded by Thompson (vol. ii. p. 155), and was preserved by Mr. Glennon, of Dublin, who received it in a fresh state, for the collection of Mr. Harrington.

THE BITTERN (*Botaurus stellaris*) is not very rare in Ireland in severe winters, especially in the south and west. Five of these birds were shot in the winter of 1878-79 in one county (Cork), one of which was caught alive in the suburb of Douglas, only two miles from the city of Cork, and kept as a pet for some weeks.

Bitterns seem to arrive in flights, and then spread in pairs over the country. If one is shot, another is almost certain to be near at hand. A Snipe-shooter once brought me a female Bittern which he had shot in a morass. I regretted it was not a male bird and in better plumage. The man at once said that he was sure there must be another not far from where he had obtained the first, though he had not seen it, for he seldom found one without seeing or killing a second in the same locality. A few days afterwards he proved the truth of his supposition by bringing me another, a fine male bird in perfect plumage, which he had flushed in the same marsh which held its mate. From my experience—and I have shot several—Bitterns frequent only the

most shaky and dangerous bits of Snipe ground, where the latter birds can scarcely be walked for.

The cry of a Bittern in the gloaming is unnatural and discordant, giving the idea to a listener of some night-roaming animal rather than a bird. I have heard a Bittern cry more than once. The booming, marsh-shaking note which it is said to utter is highly imaginative in the describer. Its cry is not unlike that of the Heron, but fuller and longer drawn; but of a truth it would never give the listener an idea that it was the voice of a bird.

Bitterns, I have been assured by aged people, were a common dish for the dinner-table at the beginning of the present century. According to Doctor Burkitt, of Waterford, they are bad as food, and from my own experience in the Mediterranean, I can endorse his statement. Captain Dugmore tells me that in winter several Bitterns are always seen about his shootings near Broughall Castle, Templemore; and most large landowners who preserve wild game can repeat the statement as to their properties, and the not unfrequent occurrence of these handsome birds thereon. Bitterns were formerly common along the river Blackwater, co. Cork, where they used to breed before the low grounds were embanked, some forty years since.

On the 15th December, 1875, Mr. J. E. Conyngnam, of Cork, while out duck-shooting, killed an unusually large Bittern in the bog which extends from near Clay Castle, Youghal, to Killeagh, near Ballymacoda. It measured three feet four inches from top of beak to end of claws, and four feet two inches between the extended wings; the bill being

unusually long and powerful. It weighed a trifle under four pounds.

THE AMERICAN BITTERN (*Botaurus lentiginosus*) has been occasionally met with by Snipe-shooters in the early part of the season, but it must be regarded as a rare and accidental visitor to Ireland. One, shot near Armagh, on the 12th November, 1845, as recorded by Thompson (vol. ii. p. 168), is preserved in the Belfast Museum. Another, shot near Dundalk, co. Louth, on the 18th November, 1868, was presented by Lord Clermont to the Museum of the Royal Dublin Society. A third, in the possession of Mr. Fennell, of Garyroan, was killed at Cahir, co. Tipperary, on the 31st October, 1870. A fourth, in the Cork College Museum, was shot by Mr. George Cronin, of Bandon, in Anagh Bog, near Kinsale, on the 25th November, 1875; and a fifth, obtained early in October of the same year, near Myross Wood, in the west of Cork, is preserved in the collection of Mr. H. P. Townshend, of Derry, Ross Carberry.

It is noticeable that all the Irish specimens of this bird have been procured in the autumn—*i.e.*, in October or November—and, with one or two exceptions, the same may be said of the English and Scottish specimens which have been recorded, while the Common Bittern is frequently met with in and after mid-winter. For the benefit of those sportsmen who may not be acquainted with the American bird, I may remark (as Mr. Harting has pointed out in his "Handbook of British Birds," p. 151) that it may always be distinguished from the Common Bittern by its smaller size, with

smaller and more slender legs and feet, and by having the primaries of a *uniform* leaden-brown colour instead of being *barred*.

THE LITTLE BITTERN (*Botaurus minutus*), although somewhat rare, is not very unfrequent in Ireland. I have twice shot this quaint little fellow when Snipe-shooting in the inmost recess of a very wet marsh. Most public and private collections can show Irish specimens; some can boast even of three or four in their cases; and I have notes of several obtained by various gentlemen when out after Snipe. The large Bittern is, however, more frequently met with, as from its size it is not likely to be passed by or allowed to escape.

Amongst Crakes and Rails, the CORNCRAKE (*Crex pratensis*) may be said to be fairly numerous, although not common, except in meadow-lands and grazing districts. That these birds not unfrequently winter in Ireland I have no doubt. I have twice found them, to all appearance asleep, in the month of February, ensconced in the centre of loose stone walls close to the ground, and I have met with several instances of the kind. Mr. Reeves, of Capard, Queen's County, writes me word that he took three Corncrakes in a semi-comatose state out of a rabbit-hole on the 7th of February, 1882, and others in the same manner in former years. I have many notes of Corncrakes being seen or shot in mistake for Woodcocks in winter, and especially on the promontories of the west coast.

THE SPOTTED CRAKE (*Crex porzana*) is much rarer, although specimens may be seen in almost every public and private collection in Ireland.

BAILLON'S CRAKE (*Crex bailloni*) is even rarer still, and, from its small size and skulking habits, is exceedingly difficult to flush. There is a specimen of this bird in the Kildare Street Museum, Dublin, which was obtained near Youghal in October, 1845, as recorded by Thompson; and another, preserved at Longueville, co. Cork, was shot on Mr. Longfield's property, at Kanturk. A third, as recorded by Mr. A. G. More, in *The Zoologist* (1882, p. 113), was caught alive on Tramore Strand, co. Waterford, on the 6th April, 1858, and preserved in the collection of Dr. Burkitt, of Waterford, whose name is well known to ornithologists as once the possessor of the single Irish specimen of the now extinct Great Auk.

THE LITTLE CRAKE (*Crex pusilla*) is of such very rare occurrence in Ireland that it is only known with certainty to have been met with once. This was at Balbriggan, as recorded in *The Zoologist* for 1854 (p. 4298), and the specimen is preserved in the collection of the Rev. Canon Tristram, of Durham. I have, however, been recently informed by Mr. Reeves, of Capard, Queen's County, that he shot a specimen of *Crex pusilla* there in April, 1871. From the similarity of size and markings, these two little Crakes may be easily confounded.

"The Little Crane, in the general colouring of the dorsal plumage," says Mr. Harting, "approaches the Water Rail, while Baillon's Crane more nearly resembles the Spotted Crane, although when adult it has the blue-grey breast of the Water Rail. The Little Crane exhibits a few white spots on the

centre of the back, and sometimes on the scapulars, but never on the wing-coverts; in Baillon's Crake, on the contrary, these white markings are very numerous and generally distributed.

"The colour of the bill is the same in both species, being pale green, and red at the base. The eye in both is crimson. The colour of the legs and feet, however, differs in each, those of the Little Crake being *pale green*, and those of Baillon's Crake *flesh-colour*."

THE WATER RAIL (*Rallus aquaticus*) appears to be less common in Ireland than the Landrail, although, perhaps, it may be less often seen, on account of its retired habits and unwillingness to take flight.

THE WATERHEN or MOORHEN (*Gallinula chloropus*) is fairly numerous on rivers and weedy ponds, but is seldom seen except singly or in pairs, and never in numbers on open waters like the next species.

THE COOT (*Fulica atra*) is very common on inland fresh waters, but not on the large lakes. On Lough Gur, co. Limerick, I have seen from two to three thousand together.

CHAPTER XIV.

The Skellig Rocks and their Sea-fowl.

LET us now take a flight to "The Skelligs" and survey the sea-fowl which annually resort there for the breeding season.

In extent the island is about eighty-four acres, chiefly precipitous cliff, intersected by beautiful green valleys. It lies some eight miles south-west of Valentia Island, the nearest boat harbour being Portmagee.

On leaving this small port, from which the lighthouse is tended, we pass first Puffin Island; then the Lemon, a half-tide rock; next the small Skellig, the well-known nesting-place of the Gannet; a mile farther, and we are at the Large Skellig, that towers skyward like a huge sugar-loaf a thousand feet in height.

There are four landing-places, and any day on which a boat can get out a landing may be effected dryshod. The principal place for this purpose lies north-east. It is called "The Blindman's Cave," concerning which a singular legend is current. There are many fathoms of water to the very verge of the rock, and a great number of steps are cut up from the landing-stage where we step ashore. The first thing to attract our attention is the number of

Gulls, Guillemots, and Razor-bills nesting. Above them may be seen rabbits skipping up the slopes, and Puffins here and there peering out from clefts and holes.

Shaping our course south by the path which has been cut three-quarters of a mile out of the rock (some of the cuttings are very deep), we reach "Seal Cave," about half way. The road runs parallel to the mouth of this cave, so that the Gulls and Razor-bills, that nest in vast numbers just across the chasm, and but fifty feet distant, can be plainly viewed. Their habits and movements may here be closely scrutinized, and are very amusing and curious. On leaving this spot we wind round till we face the broad Atlantic. Here, in 1872, the parapet wall, which is three feet thick, was thrown down by the waves for 100 yards, though 120 feet above the sea. Just below there is a landing-place. As we continue our way, the ocean lies on one hand and the towering, fantastic-shaped rocks on the other. By casting the eyes upwards toward the west, at an immense height against the sky, a curious-shaped projection of stone may be remarked, and resembling some animal in its proportions.

Below, standing abruptly out of the wonderfully tinted water, is a solitary rock known as the "Blue Man." Some quaint old superstition prevails about it, I know not what; but when workmen employed on the buildings from the mainland are bidding farewell to the island, they invariably cast at it some well-worn article of clothing, oftener than not a pair of shoes.

We now pass through two small gateways, and what a panorama comes into view! The lighthouse, within a few feet to our left. In front, across a cave, huge granite rocks pinnacled in all manner of forms, above these on higher ground another lighthouse. This latter was put out in 1871, as, being at such a great elevation, mariners oftentimes took it to be a star. To the right is the highest peak of all, called the "Spit." Near us stands a great slice of rock, 100 feet high and about 10 feet thick; another similar piece lies alongside the one erect. On reaching the angle of the cave, sixty yards farther on, we see a white stream flowing swiftly out, and gradually dwindling down to two or three specks: these are Kittiwakes. The other birds on the benches of rock, that bow to us so politely as we come nearer, are Guillemots. They have a peculiar habit of bowing most gracefully on their nesting-place being approached, chiefly the male birds, who are standing up. Now they are off! Away they go—one, two, three, six—and now a dozen and more. There roll also some of the eggs, upset in the hurry of leaving. Smash they fall on to the rock, or splash into the water far down below! The sedate-looking Razor-bills are wiser, and, scattered here and there, sit undisturbed.

We next notice the Puffins, their curious cry (Awe! awe!) attracting attention. Very handsome, too, they look, white, black, and orange; and sociable, quaint little fellows they are, nesting within six feet of the lighthouse buildings in the crevices of the parapet walls. We follow the zigzag path; here is another cave alive with Kittiwakes; a little distance are

swarms of Razor-bills and Guillemots. Here is "Katty's Point," so called as a woman of that name was wont to climb down and fill her basket with eggs, which she would safely bring up, a place no man would trust himself along, save with a rope and assistance from above. Whiz! there dart the Puffins; something has startled them; what a rush they come down with! See! the Peregrine Falcon—it is a race for life! They scatter as they near the water. The bird of prey has singled one out, and as it almost touches the surface of the sea, its hoped-for haven of safety, it is seized and borne aloft, as though but a sparrow in size, and carried in the destroyer's talons to some inaccessible crag, where its bones will be picked at leisure.

The Falcon is the Puffin's dread and constant terror. When he comes sailing into sight round a cliff the consternation is great. At all times are the Puffins on the watch, looking now on this side, now on that, with quaintly upturned eye and bill. When alighting at the entrance to their holes or on the rock, they will spy in all directions, peering up on every side to see if their dreaded enemy is in sight. Should a Falcon come swooping by, those that are near their holes dart in with undignified haste, sometimes tumbling in their anxiety. The birds that are not so convenient to shelter take wing, forming a body for mutual protection, and dashing with lightning speed to the sea, dive at once from danger on reaching it, excepting the poor unfortunate who goes up instead of down, a helpless captive.

At the end of this zigzag path we obtain a bird's-

eye view of the lower lighthouse. The old buildings are close to us, at an altitude of nearly 400 feet. Above, to the right, is a pinnacle of great height, terminating in a sharp point and surmounted with a massive stone wall. How in distant years the stones were got up to build it, for it is well-nigh inaccessible, or what purpose this masonry served, remains a mystery. Having seen the old lighthouse, we now partly retrace our steps in order to visit the Spit, the culminating peak of all. At Windy Gap we strike off the path to the west, picking our steps as best we can, and meeting a notch cut here and there in the rock to assist. We pass through the Needle's Eye, which resembles 12 or 14 feet of a good-sized chimney more than anything else, up a narrow path, till we come to a small platform, some 12 or 14 feet by 6, covered a foot deep with a luxuriant growth of sea pink. It contains several graves of people unknown. Farther yet, up a difficult path, we reach the Spit. What a view is this! On one side a stone let fall will drop into the sea a thousand feet below. A small shrub, the only one on the island, grows here; it is about six inches long, sprouting out of fissures so narrow that the blade of a knife can scarce be inserted. To the north stand boldly out the Blasquet Islands, then Dingle and Tralee; to the east, Valentia Island, Portmagee, and in the distance the Killarney mountains. In a line appear the Lemon and Puffin Rocks; then Bolus Head, Waterville, Sneem, Kenmare, Beerhaven, Dursey Sound, and the Bull and Calf Rocks. From south to north the great Western Ocean, specked here and there with inward or outward bound vessels.

To see the cells we must descend as far again as the Windy Gap, cross a valley, ascend some fifty cut steps, crossing above the Blue Cave, so called from the colour of its water, on our way ; in this cave there are vast numbers of sea-fowl, Kittiwakes, Guillemots, and Razor-bills ; Puffins studding the sides from base to summit. Some 50 feet from the entrance is a round hole, 9 feet across, called the Oven, literally swarming with Guillemots. Continuing our way to the cells, we come to a long, level, narrow rock, of curiously rough surface ; it is as if the small ripples of a duck pond had been suddenly turned into stone. Penance by the country people is to this day performed here on their bare knees. Starting at one end of this rock, they complete their pilgrimage at the other, often with cut and bleeding skin. Here is some rough ground. "Chip purre ! Chip purre !" proceeds from under the stones at our feet. We turn one over and discover a small dusky-coloured bird hatching her three white eggs. On taking her in the hand she promptly ejects an oily fluid of most unsavoury odour from the bill. This is the Storm Petrel, or Mother Carey's Chicken. The male only visits land at night to feed the female ; the latter never leaves the nest till her task of incubation is finished.

The males keep a mile or so from shore by day, for if they approach land they are instantly chased and swallowed whole by the Great Black-backed Gulls. It is no unusual thing to see these pirates, as well as the Herring Gull, sweep along the cliff and knock the unhappy Razor-bills and Guillemots off their eggs as they sit on the exposed ledges.

The plunderers will then either stick their bills into the eggs and fly off with them or suck them on the spot.

A few steps farther and we hear "Tōōk-ă-hōō! Tōōk-ă-hōō!" coming from under our very feet. Here is a hole, and we find inside the author of the peculiar cuckoo-like cry to be a Manx Shearwater. See the beautifully white egg! There is another bird crouched inside the hole—the male. He came last night on a visit to his mate to evince his affection and bring food. Sunlight overtook him, and, as his species do not leave their retreats by day, he will now remain till dark.

At last we reach the "cells"—peculiar buildings of beehive shape—inhabited many centuries ago by monks. There are eight of them, and the ruins of a chapel adjoining. There also are numerous ancient graves and mounds, the latter propped round with upright slabs of stone, the inside filled with earth to a level with their tops, and studded with gravestones of rude form—rough slabs, cut cruciform by the aid of other stones. The largest and most prominent is supposed to be that of a Bishop. The beehive cells are built of dry stones (*i.e.*, without mortar), and so close and accurately are they fitted, that from the inside daylight cannot be seen through at any part. One of the cells is now used as a chapel. On a rough altar is a skull (said to be the Bishop's). Those performing penance drink out of it from a holy well of brackish water nigh at hand. A very fine Irish cross was removed from here, which piece of Vandalism lives unforgiven in the memory of the people of the district. A gold cross

was also found and kept on the island, and was included in the inventory of the lighthouse stores, but is no longer to be seen.

About fifty yards below the cells is a garden, in which quantities of human remains have been dug up from time to time. It is the only level piece of ground on the rock—this portion of which is infested with mice. Near the cells is an underground stone-faced passage, the motive for building which is unknown. Several people interested in such matters have endeavoured to explore it to the end without success. It is very narrow, and water lies in it. Now we have viewed the chief places of interest and will descend the long flight of steps, 580 in number, passing on our way an upright stone of twelve feet high, shaped to a point at the top, and of a different grain to any other rock or stone on the island. Fifty steps more and we are again at the Blue Man's Rock, and close to our landing-place.

Having now described the Great Skellig, we will allude more fully to its feathered inhabitants, and begin with THE GANNET (*Sula bassana*). This bird is most particular as to the spot on which it nests; the only other places on the coast of Ireland at which it breeds I have previously alluded to. A former nesting-haunt—the Stag Rocks of Broadhaven, co. Mayo—as I am informed by Mr. R. Warren, they have recently deserted. On the Little Skellig from three to four hundred birds sit every year. They are supposed to build with fish-bones, but this is incorrect. The nest merely consist of hollows in the guano, with a few dis-

gorged fish-bones lying here and there. When the old birds are feeding their young, should the latter by any chance miss taking the fish from the parent bird's bill, it falls on the ground at their feet ; and as they never attempt to pick it up again, this also accounts for many of the bones lying near. In years gone by fishermen used to visit this rock in large boats, bringing with them barrels and salt, for preserving the young Gannets, and when a good cargo was obtained, returning to shore to sell it. Though the young birds are exceedingly fat, they are very strong and fishy in taste. The Gannet, when he sees his prey some distance under water, sails quietly along with head bent down, watching his chance, when suddenly his wings are partly closed, enough to guide his fall, and down he goes, perhaps three fathom deep under water, throwing up, as he strikes the surface, a column of spray several feet high. In clear water, and from a height only, he may be seen careering along with wings folded as a rule, yet at other times partially expanded. If his prey swim within a few feet of the surface, the downward plunge, nearly always taken in a slanting direction, is sufficient to make sure of a capture. I have seen Gannets remain a full twenty seconds under water after making the plunge. On coming to the surface they rise with great buoyancy, even with a spring, that lifts them nearly out of the water. Though this may be caused by the reservoir of air inflated ere diving, it would on the other hand hinder their progress under water, which is marvellous in its speed and freedom from exertion.

THE COMMON CORMORANT (*Graculus carbo*), which

is generally distributed round the Irish coast, breeds on the cliffs and prominent headlands. It lays from four to six eggs. The young birds have white breasts, and have in consequence been supposed by some old writers to belong to a distinct species. When in the nest they may be heard whistling loudly. No bird, not even the Gannet, destroys a larger amount of fish, for the Cormorant is very fond of rivers and inland lakes, where its prey is of a more valuable kind than that taken at sea. I have shot a Cormorant that could not fly, and taken a trout out of its body nearly three pounds in weight, which explained the cause of its inactivity. They use their wings under water like the Diving Ducks, and search every nook and corner for their unsuspecting food.

In clear water, from a height, their motions may be admirably seen, especially in a cave. After fishing, they may be seen motionless, with hanging and expanded wings, drying their plumage.

THE GREEN CORMORANT (*Graculus cristatus*) keeps much at sea, and nests on the headlands and islands, the Skellig Rock included. It prefers the mouth of a cave for this purpose, and in the nooks and on the ledges forms a kind of rough nest, laying from three to five eggs. The young birds are brown in colour, growing darker till the third year. An old cock has a very handsome crest and metallic green jacket.

THE GUILLEMOT (*Uria troile*) breeds in colonies in vast numbers on the Large Skellig, and at many spots round the coast. It is a striking sight to see several hundreds of these birds ranged in lines, their

direction varying with the strata of rock on which they are resting. Long rows, parallel and diagonal, in prominent white, may be seen. They make no nest, but lay their handsome green egg on the bare rock. The birds rest on the hinder part of the tarsus, with the feet in front, and as soon as the egg is laid it is rolled forward on the upper surface of the feet.

The Guillemot, Razor-bill, and Puffin only lay one egg. Their eggs often get broken, for, when suddenly startled, a Guillemot may be seen to carry its egg some little distance on the feet, or stuck to the feathers of the breast by the albumen of other eggs that have accidentally been broken. Guillemots are very friendly, and will do a good turn if they can to one another. I have seen a bird, when pelted off its egg by stones, leave it to be taken care of by her neighbour on the ledge, who, perceiving what had occurred, would tenderly roll it under her own breast. The other bird would return in some minutes, caress its friend by rubbing and stroking with the bill, then take forth her own egg and sit again in happiness. When the young bird is about three weeks old, the parent may be seen carrying it *on her back* down to the sea. When the mother touches the water she usually dives; the little swimmer is then left alone, and utters a most pitiful, whistling cry. Presently the old bird comes to the surface and paddles round her progeny, or dives and reappears with a sprat in her bill to feed her little one. After a few such lessons the tiny morsel mounts its mother's back again, and both depart seaward, bidding farewell to cliff and shore till the following spring.

THE RAZOR-BILL (*Alca torda*) does not breed in colonies, but scattered here and there among the cliffs where they can best find a suitable spot. They may often be seen close to the Kittiwakes, and even mixed with them. Like the Guillemots, they carry their young *on their backs* from the cliffs to the sea.

THE PUFFIN (*Fratercula arctica*), the most interesting of all the sea-fowl, breeds on the Skelligs and other similar islands in vast numbers. They arrive at their breeding haunts on or about the 3rd of April and leave the middle of August. On arriving they take a survey of the cliffs, then separate to retake their old habitations, generally holes in the soil, but often crevices under rocks and stones, snug corners they may possibly have held the tenancy of for years. In their absence, should a hole be taken possession of by a rabbit and her family, woe betide them if they have not cleared out in time for the Puffin.

The latter walks boldly in, conscious of his right, perhaps to find, to his annoyance, four or five young rabbits as intruders. Nothing daunted, he seizes one of the tiny animals by the ear or throat, and coming out backwards he drags bunny to the mouth of the burrow, then giving him a twisting jerk, rolls him down the incline. The Puffin, however, does not rest a moment, but pops in again and shortly appears with a second, which is served the same way, then another, and even a fourth and fifth; lastly comes a fierce and final struggle for ownership with the old rabbit. This is, sometimes, a long and angry dispute, but at length the animal is

"bitten" out and scampers forth, the Puffin closely following. The bird then stands a conqueror at the entrance to the nest, and rests after his trouble of "evicting," but a very snug, warm retreat has he now obtained. Puffins may, however, often be seen burrowing of their own accord in the soft ground. If a snare be placed at the mouth of the hole, a Puffin will slowly and cautiously pull it on one side ere attempting to enter. They often come to blows among themselves when quarrelling about their old nests, ending in a furious fight. I have seen them roll down a distance of a hundred feet in each other's clutch, biting viciously all the time.

They lay an egg of a dirty white colour, to which they are much attached. I have often seen them follow their pilfered egg to the mouth of the nest and endeavour to hook it back with the bill. Nothing is more amusing than to see their grotesque manœuvres when pairing. They stand about a yard apart, beckoning and bowing their heads, getting nearer by degrees to each other, when they finally rub their bills together, and if the "match" is made they run into the ready-prepared nest. Puffins will, when nesting, fly within a few yards of an intruder, looking most inquisitively into his face out of the corner of the eye. They are very regular in their habits, rising *en masse* from their shelters at six o'clock every evening, and remaining in view on the cliffs for about an hour later.

So accurate are they to time, that when the lighthouse at the Skelligs was building, in 1826, the workmen used to cease their labour and lay down their tools on the rising of the Puffin at the day's end.

When the parent Puffin brings food to its young, it often consists of sprats. The old bird carries these to shore, sometimes eight at a time : the heads are held in the bill and the tails hang down on either side. How does she catch and hold more than one at a time ? I consider thus. She bites them so hard and firmly, each in its turn, that they stick to the bill when she opens her mouth to seize another. Even when shot with such a mouthful, they will not fall out, but remain fixed, as an apple partly cut through will adhere to the knife.

THE MANX SHEARWATER (*Puffinus anglorum*) breeds numerous on the Skelligs in holes under stones, as before described. The young bird is covered with long stone-coloured down, which remains on the body for a considerable period. When first hatched they are but a round downy ball, and the head cannot easily be discerned. They leave their nesting haunts about the 15th of August. On foggy nights they may easily be caught by means of a lantern. They cannot in thick weather find their holes as they come in from the sea, and squat about on the open ground. They feed greatly on squid, and I have found two, and even three dozen bills of this fish inside them when opened.

THE STORM PETREL (*Procellaria pelagica*) nests in numbers on the Skellig Rock, and a few other suitable places round the Irish coast. Like the Manx Shearwater, they remain at sea till dark, for the reasons above mentioned ; and about ten at night they may be seen fluttering to land like midges, almost striking one in the face if a light be carried.

THE GREAT BLACK-BACKED GULL (*Larus marinus*) nests on the small Skellig with the Gannet. Like the latter, it is particular in its choice of situation for this purpose: though it frequents several spots round the coast, it does not breed numerously anywhere. The gormandizing power of this Gull is immense. I have frequently seen them swallow a full-sized scad, or horse mackerel, about sixteen inches long, and I should say nearly two pounds in weight. They also attack bream when near the surface, and even try to swallow them. A singular, quaint-looking crab comes to the top of the water in large shoals, as also does the squid, on both of which this bird will feed greedily. They may now and then be seen, in company with the Herring Gull, standing on a sea-drifted log, tearing with might and main at the barnacles that cover it. A wave never appears to catch them unawares when so occupied, they are so quick-sighted and active. When young they are of a brownish colour, and do not attain their full plumage till five years of age.

THE HERRING GULL (*Larus argentatus*) is generally and numerously distributed round the coast, and breeds in colonies, laying three and even four eggs, the first of which is usually laid about the 3rd of May. They are very correct to this date. If their first batch is taken they lay as many more; if they also are robbed, yet another set, and for the last time that season. The young are brown, and, like the Great Black-backed, take five years to attain maturity. They feed on anything they can find—fish, sprats, limpets, winkles, mussels, barna-

cles, and, like the large Gull last alluded to, flesh when they get the chance.

THE KITTIWAKE (*Larus tridactylus*) nests in vast numbers on the Skelligs in the three principal caves. They are most interesting in the breeding season. About the beginning of February they may be seen to come and view their old nests, to see whether the storms have swept them away. They wheel round the caves a few times and depart. It is not often they can congratulate themselves on finding many in good repair, though some have perhaps stood well. In April their work commences. First there is a general squabble for what nests happen to have remained intact since the previous spring, great chattering and disputing going on all the while. Nodding and chattering ends in biting and fighting. Their passion is aroused ; they dart at each other, and, clinging together, fall and roll sometimes a hundred feet into the sea below. Then comes the struggle which will be uppermost. At length one succumbs, and, relaxing his hold, the victor returns triumphant to the nest. Here his neighbours gather round him, talking and nodding excitedly, as he recounts, we may presume, his exploit and bravery.

Laying the foundation of a nest is an important and anxious piece of architecture. Wet clay is brought and placed on the small projecting piece of rock, often not more than four inches square. Each time a fresh supply is fetched and laid down, it undergoes a process of hardening and consolidating by the little black feet of the builder. Round and round he tramps, here a little and there a little ; if, as

is sometimes the case, he has not room to make a complete circuit by reason of his tail striking the wall of cliff, up and down he pats it smooth. Now more clay, now grass, then seaweed, more tramping, and the nest is ready. But all this work is not done in quietude. Robbers are on the watch to thief their neighbour's hard-earned materials. When the busy workman departs in search of more clay or weed, the dishonest and lazy ones will pounce down and seize his bricks and mortar. But the owner is on the watch, for, as he flies away, we can see his anxiously-turned head and eye. He perceives the robbery, and returns to catch the thief by the throat, whom he soundly shakes. In the meantime he is joined by half a dozen of his neighbours, who assist him in drubbing the plunderer. But even a rogue has friends, and these gather to his assistance, and the *mêlée* becomes general. After a time they tire of waging war, and return to their work; but the excitement caused in the settlement is not allayed for some time, as the noise and motions of the recent disputants plainly prove.

CHAPTER XV.

Birds and Lighthouses—The Skelligs—Copeland Island—Tuscar Rock—Brilliant Light-Ship, Blackwater Bank—Aranmore—Tory Island—Howth—Old Head of Kinsale—Carlingford—Dundalk—The Blasquets.

THE lighthouses on the coast of Ireland, and particularly those to the east, are admirably situated for observing the migration and habits of birds, more especially sea-fowl. Not a few of them are so placed that access to the shore is sometimes cut off for days and even weeks. The men in charge are, as a rule, most intelligent, and by reason of their position have the best of opportunities for adding to our store of knowledge concerning birds and fish. Many study, more or less practically, in their leisure hours, the natural history of their surroundings. In the long dreary winter evenings some few even preserve specimens ; others read, and learn all they can about the habits of their companions in solitude—the birds. During the breeding season, when most interesting, they are a constant amusement by day to such lone dwellers. Those who have free access to books and papers can form no idea with what avidity they are perused by men living on almost inaccessible rocks and islands, when the lantern is aflame in the afternoon, the day scarce half spent, and a long dark night to look forward to. Any one

reading these lines who may happen to have an old discarded book pertaining to fish and fowl, would, by sending it to any one of the stations hereinafter mentioned, confer a blessing, and bestow a gift more precious than a gold piece of the realm. When lighthouses are built on rocks several miles from land, as many are on the west coast of Ireland, they are often unapproachable even in the fairest weather, though at a distance the sea may appear perfectly smooth. Stepping ashore is no easy matter, and often highly dangerous. Vast undulating rollers will now and then come heaving shoreward from the horizon, generally three in succession, paying a visit when least expected, and so suddenly, that men and boats have been swept beyond recovery in a few moments.

These dangerous waves are supposed to arise from some far-off disturbance of wind and water, the outer ripples of which but reach the land. A yet more strange occurrence, and one not very unfrequent, is a quick upheaval of the sea several feet (I have seen as much as eight in a few minutes), then as sudden a fall. This will happen on the brightest of summer days, in a glassy calm, without any previous motion of warning,* and before boats

* Smith, in his "History of Kerry," 1756, alludes to the prodigious noise made by the sea at certain seasons on this coast, like the firing of distant cannon, and which, he says, can be heard a long way, adding, this usually indicates a storm or change of weather ; furthermore, that a murmuring as well as this roaring noise can be often heard all along the lower part of the Shannon near its mouth. He also says that during the continuance of these noises, the surface of the water is sometimes elevated in a most unusual manner. "I can vouch for the subdued rumbling of the sea on many parts of the west coast, though it may be calm as glass, and it is a well-known warning to fishermen

can be shifted, or seaweed gatherers remove their bundles to a place of security. But the danger of this rise is as nought to that of the great oily-looking rollers which, though they appear as nothing at a distance, eventually rush thundering over the rocks and shore. They are then a source of great peril to the poor cockle and bait seekers. These folk are chiefly old men and women, who are constantly stooping, seldom turn seaward and pursue their avocation on the verge of the water. But the unaccountable freaks and changes of the ocean on this wild, weird coast of the West are many, with its caves and cliffs, its wonderful and immense hordes of fish, its seals, and its countless fowl. Who have such chances of observing its marvels as the lighthouse men?

Now and again, after a gale of unusual severity, the shore of some bay or portion of the coast will be found strewn with wreckage. Where does this sea-drift come from? What ship? How lost? To no vessel of modern times do these curved, Bernicle-perforated timbers and twisted bolts belong. No man living trod her decks. One, perhaps two, generations ago she sank into the quiet green

of a change, or a 'south-west gale.'" The roaring noise referred to by Smith is nothing more nor less than the "Beal Bar," a sand-bank that stretches a short distance athwart the Shannon near its mouth. With a small ground swell from the Western Ocean, the bar breaks at low water and sends a heavy booming concussion every few seconds, like distant guns of distress echoing along the shore for many miles, but only to be heard in calm fair weather. This "Bar" is most dangerous to a small craft; I have been becalmed near it, and as the tide fell, mountainous confused waves would suddenly tumble the vessel hither and thither, though the movement of the sea that causes this has previously been almost imperceptible.

depths wherein she has so long lain buried. Driven gradually into the shallows by the successive tides of years, she at length became so placed as to be shaken and shattered by the furious waves.

Every county on the western seaboard of Ireland saw the wreck of one or more of the war-ships forming part of the boastful Spanish Armada. What a shore to fall foul of, with its terrific seas and perpendicular cliffs of a thousand, and almost two thousand, feet high! At "Spanish Point," co. Clare, carronades with the crest of Spain yet discernible, have been cast up by the waves. This must have been a terrible stretch of coast to weather, that lying between the Bay of Galway and Loup or Leap Head, to ships anxiously striving for the shelter of the Shannon's mouth. It was here that the admiral's three-decker was driven ashore. His cabin furniture and other valuables were floated to land, to be seized and kept for centuries by the coast men.

To this day chairs and tables, chests and plank doors, formed of old mahogany, are to be met with in fishermen's hovels, black with age and smoke, rickety with constant mending, wear and tear, but yet sound in the wood. The admiral's table, large and massive, with the Royal arms and its chasing in perfect preservation, I have seen; and it is stored as a curiosity in the hall of Dromoland Castle. This was washed up at the time the flagship was wrecked, as well as a small and curious musical instrument, which is now in a Dublin museum. Some of the crew of the ill-fated fleet here and there escaped the waves; and those of

them who were not killed by the native Irish, intermarried, and their descendants may still be traced in the dark features of the people. In some districts to this day a perfectly Spanish face may be seen under the hood of a peasant woman.

But to return to the lighthouses and bird stations. Achill, above all others, presents many features of great interest—its stupendous cliffs, its wild, remote situation, its legendary lore, and little colony. To the naturalist it has unrivalled attractions.

The climate of Achill is very mild, being so influenced by the Gulf Stream, yet, standing well into the ocean, it is pleasant and bracing. This warmth tempts all manner of birds to its vicinity, which, especially in severe winters, leave the inmost districts for its milder climate. On the mainland, near Achill, the Mediterranean heath grows luxuriantly to a height of five feet. Consumption is there practically unknown. A large proportion of the British birds frequent its shores, including the Golden and Sea Eagle, the Peregrine Falcon, Osprey, Sparrow Hawk, Kestrel, Merlin, and Harriers. Swans arrive in large numbers annually. Large gaggles of Bernicle; Brent and Bean in smaller numbers; and now and then the rarer Greylag; Wild Duck, Wigeon, Teal, and other species in profusion. Duck and Teal nest regularly there. The Great Northern Diver, Red-throated Diver, Grebes, Cormorants (two species), and Red-breasted Mergansers, more or less abundant (the latter nesting there yearly). Guillemots, Razor-bills, Puffins, and various Gulls, from the Great Black-backed Gull to the smallest of the genus. Terns, Oyster-

catchers, Curlews, and Small Waders, Plovers, Golden, Grey, and Green. Ravens are fairly numerous, and nest in the cliffs.* The Chough is common. The late Mr. Pike used often to tame them, and had one that every night for four years roosted over the kitchen fireplace. He never allowed them to be shot, considering them somewhat scarce elsewhere. Woodcocks and Snipe abound in their season.

Mr. Sheridan, of the Slievemore Inn, Achill, who has made a study of the birds there, says :—

“ Bewick’s Swan and the rarer Hooper visit this island about the end of November and leave the end of February. Bewick’s Swan is much the commoner of the two. I often counted over one hundred together on a lake in the neighbourhood (Keel). Great numbers of swans might be shot every year, but the late Mr. Pike and Lord Cavan, whose lakes they frequent, objected to their being disturbed. A few years ago half a dozen Bewick Swans remained till the end of May, and might possibly have bred, had they been able to find a place to their liking for the purpose.

“ Bernicle Geese visit Achill in astonishing numbers, arriving about November 1st and leaving in March. I have known eight killed at one shot with a shoulder-gun. Brent Geese are far less numerous, though I have, now and then, seen them in hard weather on Lord Cavan’s Salt Water Lake, which borders the sea. Bean Geese visit us every winter, and about four o’clock in the evening

* Ravens are by no means scarce in a few districts in Ireland, but are more abundant near Caragh lake, co. Kerry, than elsewhere.

frequent sandpoints near the tide. White-fronted and Greylag I have also seen here, but they are chiefly found about the marshy bog streams, and are not easy to approach. A Bean Goose made friends not long since with some birds belonging to a neighbouring village. It would come close to the cottages and mix with the tame geese.

“Ducks, Wigeon, Teal and Sheldrakes are in fair abundance at the Salt Lake on Lord Cavan’s property, as well as on Mr. Pike’s lakes. Gadwall and Shovellers are rare, but are occasionally to be met with in the bogs and morasses, the former but seldom. Wigeon do not breed in Achill.

“Mergansers are found in numbers about the Sound, and the Red-breasted Merganser breeds there. Scaup, Pochard, and Golden-eye appeared in Achill in large numbers during the past two hard winters; the Pochard frequenting the fresh waters.

“The Tufted Duck is not rare, but is only seen in small numbers. The Long-tailed Duck is most uncommon.

“Golden Plover are very abundant, Grey Plover rare; Green Plover numerous on the mainland, though not on the island.

“Woodcock and Snipe are fairly numerous. I observed a Great Snipe (*Gallinago major*) on the 26th of July, 1881.

“A Grey Phalarope was shot in December, 1879, by Mr. W. Pike, of Achill, and I shot another in October, 1880.” Mr. Sheridan adds, that there is no reason to fear the extinction of the Chough, as some have supposed, for it is still abundant in Achill, and he has seen a hundred and fifty,

old and young, feeding together on the strand. I myself have counted upwards of a hundred Choughs in a day on the western shore of the island.* I also noted thirty-three Redbreasted Mergansers (old and young together) in Blacksod Bay, co. Mayo, near Achill Sound, during the first week of September, 1881.

Sixteen miles north of Achill, far out in the ocean, are some islands, three of which are inhabited, namely, North and South Inishkea and Davillaun. The others are not. Many rare birds and eggs might be obtained by searching these great breeding haunts at the proper time, as they stand lonely and isolated from all civilization. On the Inishkea Islands, as on the Blasquets, the people bow to a self-elected king, and make and respect their own laws and customs.

Skelligs Lighthouse, co. Kerry.

During the frost of January, 1881, several Cock and Snipe visited the islands, and remained till the thaw (J. Gardener). In the account already given of these islands (p. 254), the birds which frequent them are described.

* Choughs breed here and there along the whole of the south and west coasts of Ireland. They are fairly numerous at Ardmore, co. Waterford. They nest in numbers in Achill Island and in Clare Island (Clew Bay). I have seen them frequently near Loop Head, and at the Cliffs of Moher, co. Clare, also on the coasts of Kerry, Connemara, Donegal and Antrim. Their sauciness when tamed, merry cry, and handsome plumage enhance their value as pets, or as objects of interest along the shore.

Copeland Island Lighthouse, co. Down.

Several Woodcock were killed against the lantern, and a few shot on the island, during the winter 1880-81. H. Williams, the keeper, a most observant man, tells me that three Cuckoos and a Falcon (Peregrine), which he has stuffed, were killed against the glass. He says he often takes down Skylarks from the light and puts them into a dark room or basket till day, as it is useless to let them go; they are especially persistent, and will return to flutter round the lantern. In 1881 several Snipe were got at the light, and always in hazy weather. In 1879 a Snipe actually nested in the island, and brought out her young, some of which my informant captured as they were running in the grass and ferns. Mew Island, which derives its name from the birds, is some two hundred yards from the Copeland. In 1880-81, about two hundred Ducks and Sheldrakes rested there daily through the winter. In May the Terns arrive, and lay their eggs in vast numbers; and Williams feelingly says, it breaks his heart to see these beautiful birds shot by hundreds, and their eggs taken away in basketfuls. Mr. Patterson, who visited the Copeland in July, 1881, to inquire about the Falcon above mentioned, says that he "flushed several Snipe on the adjacent island (Mew), no doubt nesting."

Tuscar Rock Lighthouse, co. Wexford.

Birds when migrating, by reason of its position, strike this light in greater numbers than they do

any others on the Irish coast. P. Cornish, who was sometime in charge, informed me that birds in countless numbers collect round the lantern on dark nights; and that he has caught Woodcock, Snipe, Cuckoos, Partridges, Crows, Pigeons, and Sea-gulls. He says it is very easy to catch them by hand, for they appear quite blinded as they beat and flutter, like moths, against the glass. The Tuscar is seven miles from the shore, and it is curious that non-migratory diurnal birds, such as Crows and Partridges, should leave the land for the distant glare of light. The lighthouse keepers to whom I have spoken on the south-west coast of Ireland, state that very few, and in most parts no birds are killed against the glass during the time of migration. The Cock and Snipe, however, being night fliers and feeders, get killed against these lights now and then during the winter; but not when the passage is on in spring and autumn.

G. Brownell, now of St. John's Point Lighthouse, was formerly at the Tuscar for three years, where he once shot a Goatsucker, and another time a large Owl on the rock.* In the months of September and February, he says, he has often caught in one night some two hundred Black-birds, Thrushes, and Starlings. G. Dunleary, now

* A more curious capture of an Owl, and a valuable one too (the Snowy Owl), took place in September, 1879, on board a sailing vessel three hundred miles south-west of Cape Clear. It was preserved by Mr. Rohu of Cork, and is now in the possession of a tradesman of that town. I may add that, exclusive of this one, five Snowy Owls have been obtained in Ireland, to my knowledge, during the past few years. A pair were killed almost at the same time near Pontoon, co. Mayo, in 1876.

at the Old Head of Kinsale, says that when in charge at the Tuscar, he once got eight hundred birds in a night, consisting of Woodcock, Land and Water Rails, Snipe, Plover, Starlings, and Black-birds; the great majority being composed of the two last species. Williams, now at Copeland Island light, tells me that he was also at the Tuscar, and that the Little Bittern in his possession was shot by him on this rock.

Brilliant Light Ship, Blackwater Bank.

The lightkeeper here, P. Cooney, like most other lightkeepers of the east coast, reports that Black-birds, Thrushes, and Starlings are the chief sufferers from the light; but that Duck and Teal now and then fall on deck much damaged, by striking the lantern above. He adds that about the end of March large bodies of Swallows pass the ship coming from the direction of Wales, and shaping their course towards Ireland; he again remarks them as they return about September 1st.

Aranmore Lighthouse, co. Donegal.

Woodcock strike this lantern in October and March, four to six being the most ever obtained in a night. They are rare, and never seen by day, in this locality. Snipe are to be found in great numbers on the marshy parts of the island. They strike the glass generally with southerly winds, on wet drizzling nights. Two large hampers, the

keeper tells me, he has often filled between dusk and dawn ; consisting of Snipe, Curlew, Woodcock, Blackbirds, Starlings, Thrushes, and other varieties of small birds. Snipe nest yearly on Aranmore, and towards the end of April resort to the highest and most heathery portions of the island for that purpose.

Tory Island Lighthouse, co. Donegal.

J. Sweeny, in charge of this lighthouse, reports that Bewick's Swan visits this island in small numbers once or twice only during the winter, but is rarely killed, seldom if ever stopping more than a few hours, as though resting. The Greylag Goose visits the island now and then ; two were shot in the winter 1880-81, and as many as eight have been killed in one season. The Black Bernicle (Brent) come in small numbers, but seldom remain. Guillemots breed numerous, laying their eggs on the bare rock. The Black Guillemot and Razor-bill also breed there, but in smaller numbers, as do the common Tern, Herring Gull, and Little Petrel (Storm Petrel). Golden and Green Plover come in limited numbers, but do not nest. The Thrush, Blackbird, Stonechat, Starling, and Golden Plover all strike the glass. The Stonechat nests on the island. A pair of game Hawks (Peregrine Falcons) breed yearly on the east end of the wild cliffs. Woodcock sometimes arrive in severe weather, such as frost and snow ; but the island is barren, with no cover for them ; and most of the people have guns.

Howth, co. Dublin.

The keeper states the only birds that strike the lantern here are Starlings, Blackbirds, and Thrushes, at the beginning of winter. Holland Auks (*i.e.* Great Northern and Red-throated Divers), before a storm, seek shelter in the bay, but disappear when the weather clears. He adds, what I have often noted elsewhere, that a couple of these divers haunt the locality throughout the winter, and seem to take and keep possession of some particular part of it.

Old Head of Kinsale, co. Cork.

Swans are rare in this locality, but several were seen in the severe frost of January 1880-81. I saw one Black one on the wing. Geese visit this headland only in exceptionally hard weather; three or four were shot in the winter 1880-81. There are great numbers of Duck and Wigeon about, but they are hard to get within range of, as they rest out at sea all day and only come inland to feed at night. After a gale of wind, a dog caught a Shel-drake on the beach, the first ever seen at this place, though they are common enough at Dungarvan, on the Waterford coast. The Common and Green Cormorants, Manx Shearwater, Razor-bill, and Guillemots, all breed here. Great Northern Divers and Loons (Red-throated Divers) frequent the shore and bays in the winter months, but in limited numbers, for the water is too deep and rough for them to fish successfully. The Hoopoe has been

shot here more than once. Snipe are plentiful, and the Great Snipe is met with on the mountain on which the lighthouse is built. It is about half as large again as the Common Snipe, and lighter in colour. I have seen several. A few Woodcock only are to be found here during the period of migration; they then appear as if resting, for they never remain more than a few days. But in January, 1881 (the great frost), they came at the end of the first week of the hard weather in immense numbers, and stayed till the thaw. About two hundred couple were shot during that time by the local gunners round here. Plover also come in the winter, but only in frost and snow, with the wind from the north-east.

They then arrive in vast numbers, both Golden and Green. A large proportion of these birds during the frost alluded to passed that period westward of the Head, a very unusual thing for them to do, for they are always observed in a severe frost to fly out to sea in a southerly direction (G. Dunleary).

Carlingford Lighthouse, co. Down.

A. Kennedy reports that the birds which strike the glass, in small numbers, are Teal, Curlew, Seagulls, Blackbirds, Thrushes, Starlings, and Larks.

Dundalk Lighthouse, co. Louth.

Bernicle come to this bay, but in far greater numbers in some winters than in others. They were

much more numerous some years ago. They are most difficult to get within shot of. People here drive along the beach, sitting low in small carts, to get near these geese as they feed on the strand weed. But their success is very indifferent at any time. Gannets are abundant here in the summer months; to watch them diving, and observe their difficulty in rising from smooth water, helps to pass many a dreary hour. The only birds that strike the glass here are Stares (Starlings). This lighthouse is built on piles three miles from land. Now and then a Cormorant alights on the balcony of a dark night. On being discovered, it will precipitately tumble down a distance of thirty feet, and fall on the water as if it were a bag of sand. During the intense cold of January, 1881, the bay was swarming with Blue-billed Wigeon (Scaup), and they became very tame. Dozens would swim round and dive under the lighthouse and among the pillars supporting it. They did not leave on being fired at, or take fright, if the shooter was concealed behind a door or window, and though the fog-bell was ringing they would keep as usual all round (James Healy).

The Blasquets.

Though the Great Shearwater has never been found breeding on the Irish coast, it is with good reason believed to do so. It has not unfrequently occurred, and may be seen in a few collections of native birds. Mr. Warren, of Ballina, has seen it more than once. One 23rd of August, several years since, he plainly identified two birds of this

species when hake-fishing off Cork Harbour. Again, on the 22nd of August (another year), this gentleman found a young Great Shearwater thrown up by the surf dead on the beach near Downpatrick Head, county Mayo. Mr. Chute, of Chute Hall, has two in his collection, shot on the coast of Kerry, at the Skelligs; and Mr. A. G. More,* of the Science and Art Museum, Dublin, informs me he has recently obtained a couple that belonged to the late Mr. Andrews, a well-known Irish naturalist.

Mr. Lloyd Patterson procured one in Belfast Bay in 1869. Mr. Nelligan, of Tralee, who sails a good deal in summer about the western coast of Ireland, says, "I am confident that the Greater Shearwater is to be found on the Skelligs and Blasquets. I feel sure I have seen the bird on the wing about these islands." Mr. Warren says, "Most ornithologists dismiss the idea of this bird breeding on the Irish coast," but adds, "that he cannot share that view, until the Blasquets, Skelligs, Stags of Broadhaven, and other remote places have been properly explored by competent observers." The nest of such a rare species as this would be difficult to find. The birds would never show till dusk, and the males keep several miles at sea. At night, judging by the habits of the Manx Shearwater, they come in, either to bring food to the females, or to take their turn on the nest whilst their mates go, perchance, in search of food. Deep in a crevice or hole, a pair of Manx Shearwaters may, at night,

* Mr. Chute having sent these birds for inspection to Mr. More, one of them has been discovered by him to be a specimen of the Sooty Shearwater, a bird that has not before been recorded in Ireland.

be heard twittering together, and from this noise I have often been able to detect their whereabouts. Their nest might, by even a careful searcher, be passed over a dozen times without being suspected, though at the same time close at hand. In June, 1881, I organized a visit to these islands, to make inquiries and search for the Greater Shearwater, but without success. If it is to be found breeding anywhere in the British Islands, the west coast of Ireland is a more likely place than elsewhere; the wild, uninhabited islands on this coast affording tempting and suitable haunts.

The nearest town to the Blasquets is Tralee, from whence a drive of nearly thirty miles must be undertaken. The scenery on the journey is as beautiful as it is varied. The road skirts both Tralee and Dingle Bay for some distance. The sand-banks of the latter destroy its capabilities for being a fine harbour. To reach the islands a stout smack must be hired, for, by reason of the strong tides caused by the rocks, the sea here is very turbulent. On leaving the harbour's mouth (Dingle), we pass first the "Crow," a half-tide rock. The cliffs as we sail by the mainland are very bold and rugged. The Black Guillemot nests numerously both here and on some of the islands. On clearing the land, we pass some small islands, and then reach the Great Blasquet, which is inhabited. Some interesting antiquarian remains exist there. Continuing our course westward, we come to Inish-Nabro, with its prominent castle-shaped rocks. Here the Puffin and Manx Shearwater breed in abundance, especially on the southern side.

Hundreds of holes are burrowed by the former on the sides of the slopes, and great numbers may be seen scattered about. Only a few Razor-bills and Guillemots breed here, and those chiefly on the north and north-east side of the island. The next and most western of the group is Inish-Vickilane, a beautifully green and rather low island. A herdsman lives here, tending sheep for the proprietor—by no means an enviable position, as communication from shore is often cut off for a long period. Here the Oyster-catcher breeds. On our landing they trot along in front, a few yards in advance only, and when flying overhead utter their sharp peculiar whistle, an indication that their nests are not far off. We now sail N.W. to the Teraght, ten miles from the mainland, and on it stands the lighthouse. This rock is almost divided into two portions, being perforated near the centre by an immense cave, through which a large boat might sail.*

There are two landing-places, north and south, with cranes for lifting supplies ashore. On both sides numbers of steps are cut in the rock to facilitate ascent.

The south landing is dangerous, save in the finest weather, as the back scud of the sea throws up the water in great volumes. On landing we ascend the steps that lead to the buildings, near to which is obtained a fine view of the north-eastern

* The northernmost island of the Blasquets, by name Inish-tooskert, and some rocks near it, are favourite nesting-places for sea-fowl, but are very seldom visited. A search there at the proper season might be well rewarded.

portion of the island, alive with Puffins : here, there, and everywhere are they dotted.

All the evidence we obtained here concerning the Greater Shearwater was communicated by an old cliff-climber and egg-taker. This man was well acquainted with the seafowl of the islands. He accurately described the Manx Shearwater and its habits of remaining at sea by day and lying hid till dark. He also, unprompted, remarked, "There is, however, a bird of the same kind, twice as large, that has always been very scarce, but, when searching for the common sort, I have taken out of a hole the larger, together with the eggs, which are of much greater size. I find perhaps one or two only of these latter every year, and some years none at all."

Whilst alluding to rare seafowl I may state that I have taken great pains to sketch and describe THE GREAT AUK to fishermen and light-keepers, who have assured me that they know the bird, and have met with it on the north coast of Ireland. It was very large, they said, and swam and dived with wonderful ease, and could not fly. Several specimens, however, of the bird described having been obtained and sent to me, invariably proved to be the Great Northern Diver. The Great Auk is, I fear, a thing of the past, and worth his weight in gold if procured. The only properly authenticated specimen ever procured in Ireland is the one now in the University Museum, Dublin.

When looking over Doctor Burkitt's collection, in Waterford, a short time since, he assured me that Thompson was in error when he stated, in his

"Natural History of Ireland," that *two* Great Auks were obtained off the Waterford coast at nearly the same time. He had since found them to be the *same*; the one Dr. Burkitt obtained being the phantom second as well, having passed through several hands, and thus causing the mistake. Dr. Burkitt, at the time he obtained this only recorded Irish specimen, was ignorant of its value, and gave it to a collector, who assured him the bird was of little account. He also parted with his other great prize in the same way—a Gold-vented Thrush, a bird never before or since obtained in Europe.

Thompson speaks of a *third* Great Auk as having been washed ashore dead near Carberry, co. Cork, but the gentleman from whom he derived the information told me the report was incorrect, as this bird had long wings.

CHAPTER XVI.

Birds of Prey—The Golden and White-tailed Eagles—The Osprey,
—Kite, Buzzard, and Peregrine Falcon—The Greenland and
Iceland Falcon—The Smaller Hawks and Owls.

THE magnificent cliffs on many parts of the Irish coast, more especially in the north and west, afford secure breeding places for numerous birds of prey, conspicuous amongst which, from their size, are the Eagles.

THE SEA EAGLE, or ERNE, is as often seen in Ireland as the Golden Eagle, but is usually taken for the latter bird by all but those who are well acquainted with both species. The Sea Eagle is more vulture-like in shape and aspect than is the Golden ; the latter looks a hawk, every inch of him, active and strong. The foot of the Sea Eagle is better adapted for clutching and bearing off its prey, to feed at leisure, than is the case with the Golden Eagle, which cannot grasp so firmly, though well enough to carry a meal to its young. The foot of the Golden Eagle seems rather designed to seize small animals on the ground, and there hold them, to eat on the spot. I once saw one caught, after a royal feast on a lamb, so gorged that it could not fly. The Golden Eagle drops instantly on its prey, which it will grasp so tightly that at the moment of seizure the talons pene-

trate deep into the flesh. I have seen one fall on a rabbit purposely tied to string, which it left on finding it could not lift it. On first seizing the animal, it stood erect, with slightly drooping wings, looking fiercely round for a minute or more. The rabbit never moved after being grasped, and the bird's talons, as I afterwards found, had penetrated through the eye to the brain. A Sea Eagle, a few years since, was seen by some fishermen, mending their nets, to stoop at the head of a seal in the Kenmare Estuary, and before the bird could disengage its hold it was dragged under water, the work of a moment. Being thoroughly soaked and half-drowned ere rising, it lay on the surface with extended wings, helpless and exhausted. A boat put off from shore and captured the Eagle; but it never revived enough to stand upright, though it lived for nearly a day. The Sea Eagle rarely seizes fish other than those cast up dead or floating sickly on the water. I had the good luck, not long since, to see a Golden Eagle chasing a hare. We were resting near the summit of one of the wildest mountains in Kerry, where my companion and I had climbed to fish a lake for trout. We observed an Eagle flying up the steep slope a few yards above ground, stopping, turning, and twisting most awkwardly. We knew the bird was in pursuit of some animal, but, by reason of the high heather, could not discern its kind. Suddenly a hare burst into the open, and all was plain to our view, hunter and hunted. Every check or turn puss made, the Eagle would overshoot his mark. Whenever the bird stopped to seize with stretched and drooping

talons, the hare would give a spurt, and Aquila was left in the lurch. The hare next took a turn downhill. There the Eagle was again at fault. When clutched at, the hare would slant uphill, and the pursuer missed his aim. At length, after a long and, to us, an exciting chase, the frightened animal darted into some furze, and, to our joy, escaped, her tormentor flying sullenly off.

Now, from this well-enacted scene I should decide that an Eagle had little chance of seizing its prey on the ground save when falling from a height. In this instance the bird, from its low flight, never had full control over its movements. Its steering was bad, its small tail being a weak rudder. Its wings flapped clumsily, and it was often left yards behind ere it could get up speed again after a false stoop. The chase lasted for fully half a mile. Two Eagles might puzzle a hare into their grasp (and I have heard of their doing so), but a single bird, in my opinion, could hardly succeed in actually *chasing* down a hare.

An Eagle stooping from a height on a hare in *open* ground, will seize without fail, especially if the frightened animal sees its danger and, paralyzed by fear, crouches, as is sometimes the case.

When Eagles *follow* a hare, dodging it in and out of rough ground, they are often unsuccessful. In such pursuit they continually utter a wild, barking cry. A gentleman of Achill described to me how he saw an Eagle take a hare in a curious way as it was running up a steep slope under a crag. The pursuer being unable to drop directly down as usual, flew high at one side, swept below, then from

the impetus gained by the fall, slanted up the hill-side with stiffly-extended wings, and so snatched the hare off the ground as he skimmed past and upwards.

O'Flaherty, in his "West Connaught," relates how the Eagles, by blinding the deer with their claws and beating them with their wings, drove them over cliffs, that when killed by the fall they might the more readily enjoy a feast on the carcase. This is curiously confirmed by an old Achill man, now living, who says :—"I rose early one fine morning to see if my horses were all safe ; a mare, her foal, and a two-year-old. I found them near the cliffs over the sea. As I came near, in the early dawn, I saw three Eagles darting at them and fastening their claws into the backs first of one then of the other, and driving them towards the precipice. As the animals sheered off from the edge, the Eagles would keep on their landward side and frighten them again to the cliff. I ran, as for my life, but my dog was before me, barking loudly. When the dog got near the horses, and the birds saw me running up, they flew away. The horses were wild with fear, and trembling. Over this cliff, on to the sands below, the villagers often threw down dead animals, such as sheep and horses ; on these the Eagles were known to feed, and my horses did they wish to cast down."

Eagles, alas, are now rare in the west of Kerry ; on the vast peninsular of mountain that lies between Tralee Bay and Castlemaine Harbour, and where they formerly abounded, very few now exist. A fine one was trapped in that district a few years

since, but escaped with the loss of a foot. He was again captured, this time by the other leg; the captor bound his prize with a stout length of cord, but the bird managed to escape a second time, the line being secured to the sound ankle. For months he was to be seen soaring about the peaks with this cumbersome appendage, and was pointed out to travellers as a curiosity. A third time the poor bird was taken, and not again making his escape, was held a captive for three years, when he pined and died. Near Killarney, Eagles were by no means uncommon not long ago, and formerly nested in that district, but are now seldom seen.

Mr. Evatt states that before the days of strychnine he has seen from five to six Sea Eagles at one time hovering over the Island of Inishboffin, off the Galway Coast. Mr. Sheridan, of Achill, also blames this deadly poison as a merciless exterminator of these noble birds. He says, "I was speaking to a keeper here the other day. He told me that one year he poisoned eleven Eagles on the island."

Eagles nest on the north coast of Mayo, between Downpatrick and Erris Head. During spring, when their young have to be fed, the old birds become fiercely intrusive. In the little mountain hamlet of Bangor, near Belmullet, in 1881, an Eagle bore away, more than once, geese and fowls from the road near the village. In this district they are not unfrequently seen hovering over the hill-side farms, or passing from one hill to another, on the alert for a wandering lamb wherewith to

feed their brood, perhaps twenty miles off. Previous to the year 1854, Eagles were numerous throughout the west of Mayo, especially in Achill and Ballycroy. Fowls were in those days constantly carried off, close to the houses, and lambs and kids daily from the fields. A gentleman who has known these barren wilds since childhood assured me that gun, poison, and trap were powerless to thin their ranks, but that the long continuance of deep snow in 1854 caused great destruction amongst birds of prey, since nearly all the game was starved to death, and food in consequence denied to them, the Eagles suffering most.

Eagles are now not unfrequent in the desolate mountains lying between the entrance to the Killeries and Lough Mask. In 1881 I viewed more than one from the Westport Road that runs near. A grouse-shooter told me he had lately seen five or six in this locality in the course of a day, and that he seldom walked far without finding the remains of lambs, hares and grouse, to confirm their presence.

Achill, "the island of the Eagle," is now a safe breeding-haunt for these noble birds. The cliffs of Croaghan (almost 2,000 ft., perpendicular) and the Cathedral cliffs at Menawn, 900 ft., consist of sheer precipices extending for miles; both these rocky extents are, for the greater part, and where the Eagles build, completely unassailable to the most daring of cliff-climbers. Mr. Weldon, Mr. Pike, and Lord Cavan, the chief proprietors in the island, do their utmost to protect these birds.

The tallest peak of Achill is Slievemore, on the

seaward cliff of which the following incident occurred :—

A fisherman descended to rob an Eagle's nest. In the act of doing so, the old birds attacked him. He made a self-defending stab at the most aggressive with his knife, and, in so doing, severed all but one strand of the rope that supported him 'twixt sea and sky. He called lustily to the men above, who quickly hauled him to the top. The remaining strand parted when he was close to the summit, and just as he grasped the slippery brink of the precipice. A few seconds more, and he would have been food for the birds he robbed. The very spot where this took place is still shown to climbers.

This same peak was the scene of an awful accident in the spring of 1881. A lady visitor to Dugort, alone and unguided, attempted to scale the height. At nightfall she was missed. All was consternation in the little colony. Every available man ran hither and thither up the slopes, calling and showing lights in vain. One climber strayed from the rest. His lantern failed; he lay resting on the heather at the base of a cliff. He feared to wander far in the gloom, and anxiously longed for the coming day. The sun rose grandly over the mountains to the east; a robin tunefully welcomed the brightening dawn; never sang robin sweeter than to the weary climber. Two Eagles circled unusually low overhead, and there, close by, lay the object of his search, shattered and lifeless.

On Curraun Mountain, near the south entrance to Achill sound, three years since, a herd was

lowered over a cliff to rob an Eagle's nest in the interests of the lambs under his charge.

He carried a small sack fastened to his waist to put the eaglets in. His arms, as usual, were free, that he might be able to fend his swaying body from projecting ledges of rock. He captured the brood safely, and was being drawn aloft by his friends in triumph.

Half-way up, the parent birds returned to the cliff, one bearing a lamb in its talons; the bird that carried food to, as she thought, her expectant young rested on a slab of stone hard by, but the other, probably the male, came at once to the attack, beating the robber of the eyrie furiously about the head and face with its powerful wings and clutching his arms with the talons as he fought to defend his face. Bruised and bleeding he reached the top, nor could he push away from the sharp rock as he was drawn upwards. He told me his first impulse was to throw the captives loose, and would have done so, but he dared not for one instant lower his hands from before his face, or his eyes would have been torn out by his fierce assailant.

Foxes were formerly very abundant in Achill, as they now are across the sound in Erris, and might be seen chasing lambs and small sheep by day. A poor woman with her infant of a few weeks old, laid it down on the heather to run after a fox that was prowling round her little stock of fowl. On turning home, to her dismay she saw a large Eagle bearing her child away. The unhappy mother, wild with fear, ran through the village. She could not

find words to explain her grief, but with outstretched arms pointed to the snatcher—a mere speck in the sky, as he winged his way across the sea to Clare Island, five miles distant. Boats, urged by strong men in frenzied haste, soon traversed the intervening water. At Clare Island all were aroused, ropes and willing hands ere long reached the robbers' retreat, and there the child lay peacefully sleeping on the ledge of rock used as the plunderers' nest! The eaglets were busy rending a lamb freshly brought them by their other parent, thus happily for a time disregarding the child, which was eventually restored to its mother's breast, safe and without a scratch; for the thick red flannel that Achill women wrap their babes in had protected the flesh from the Eagle's talons.

A resident of Achill told me that, a few years since, the girl who, as an infant, thus narrowly escaped death was living, and that he knew her well. Eagles fly backwards and forwards across Clew Bay from Achill to the Killeries, where they also breed. Like the Peregrine Falcon, the old birds always turn the eaglets adrift to shift for themselves, after a few lessons in hawking and flying.

When crossing the bay, they are often seen by the islanders and fishermen at sea carrying hares and lambs in their talons; and have more than once been known to drop their booty in the water, finding it too heavy to carry some twenty miles without a rest.

A peasant, last year, taking shelter from a storm, was startled by what he thought a lump of rock

falling close to him ; as he expressed it, the concussion was like "a shot from a gun." It was a hare that an Eagle, tired of carrying, had dropped from the clouds, and which was smashed to pieces by the fall.

The following interesting notes on the habits of Eagles, as observed in Ireland, have been kindly communicated to me by Mr. Richard G. Symes, of the Geological Survey of Ireland :—"The birds I saw in Mayo and Sligo were chiefly Golden Eagles. They built in the cliffs at Aughris Head, between Easky and Ballysadare. I have repeatedly seen them in that locality, especially in the mountains north of Lough Talt, and as I rented a mountain there, I had good opportunities of observing them. When surveying the mountains in Sligo on the estate of Colonel Cooper, who strictly protects the Eagles, I saw one hunting, and watched him carefully until I saw him go down. I then went in that direction, and rising from a cliff saw the bird on the moorland, about eighty yards from me. I walked in a circle towards him, and he never perceived me until I got within forty yards, when he went carelessly away. This bird had all its head up above the eyelids covered with blood from the hare just killed. The hare was on its back, legs all stretched out, and the breast opened, and most of the entrails gone, no other part being touched. I have seen a great number of Eagles at various times, and where I chiefly saw them the general impression was that as long as the old birds continue to breed, they drive their young ones far away from them, as it

were, out of their own hunting grounds. In Clare Island, in the years 1868 to 1870, I repeatedly saw Eagles, and very close. No guns were allowed on the island, and the birds seemed to be aware of it, for they were most daring, and by no means as wild as on the mainland. They did an immense amount of damage both to lambs and geese; there were no hares there. The Eagles used to watch the sheep lambing, and carry off the lambs to their nest in the inaccessible sea-cliff at Knockmore. They always hunt *against* the wind, so that returning with their prey the wind helps them. On this island, on which I was storm-bound in January, 1868, for three weeks, I frequently saw these birds within forty yards of me.

“On the mainland, on the road between Westport and Killery Bay, I have frequently seen Eagles hunting in couples, but at a considerable height, as if they knew guns were to be feared. Tame geese would always tell by their noise when Eagles were about, no matter what height they hunted at, but hares were their chief food in this district. One year I rented a mountain in Mayo, to the north of Newport, called Glenlaura, and when getting to the top of it, I lay down to rest, and a grand Golden Eagle sailed within sixty yards of me. On the top I found four newly-killed hares, no part eaten except the inside.

“In 1872, when surveying the twelve Pins of Connemara, I had ascended a mountain to the east of the Maam Valley, and at a height of 2,000 feet I was rounding the top, below which was a perpendicular escarpment, and an Eagle sailed off

a horizontal flag which overtopped the precipice, and within ten yards of me.

“As regards Antrim, they say there are no Eagles, but I lately saw one on the cliffs about Garron Tower, and I am sure the north-east coast of Antrim would be a most favourable breeding-haunt for them.”

Colonel Cooper, of Markree Castle, Collooney, co. Sligo, writing to me in October, 1881, says :—

“I am afraid the Golden Eagle is becoming scarce, although, many years ago, I gave my keepers orders not to kill them. I never heard of Eagles breeding inland on any of the hills near Lough Easky. A pair used to breed every year above Skreen, and I hope do still, but about Benbulbin and the Glen Car Range is their favourite resort. Two winters ago an Eagle, and now and then a second, remained about the Union Rock and Ballygawly Mountain all the season. I might easily have taken it, but I did not allow my keepers to either trap or shoot it. I afterwards heard that Mr. Wynne’s keeper destroyed three Eagles the following spring, and I am afraid my visitor fell a victim to his taste for mountain hares.”

With regard to the food of the Sea Eagle, Mr. L. L. Dillwyn, the author of “Birds of the Swansea District,” writes me as follows :—

“I have never myself seen the Sea Eagle kill hares, but after seeing one over the moor, have often found hares freshly killed, and have no doubt in my own mind that they were killed by this Eagle, though it is not commonly supposed to do so. I have often seen it beating the ground

like a dog, quartering it, and evidently to me in search of hares. My head keeper, F. Hearn, and the people about say they kill them. I have seen one with my own eyes seize a tame goose near my lodge here (Ballycastle, co. Mayo). There was a pair of Eagles, and when one came down after the goose, the other soared about at a considerable height, as if keeping a look-out. One of my caretakers, who lived near some rocks where Eagles breed, once caught a young one, which he kept tied up in his farm premises for me. I did not want it, however, so he killed it, as the old one used to come every morning and catch one of his geese, or fowls, with which to feed the imprisoned young one.

“They eat carrion, and *may* eat fish; but though I have seen them frequently, and almost constantly, over the moor as though searching for prey, I have never seen them fishing in the sea, nor even flying near the surface of the water. They breed, however, over the sea in almost inaccessible rocks.”

F. Hearn adds that he has known the above locality since 1866, and that every year since then there has been an Eagle's nest in the neighbouring cliffs, and one year a couple. He says he has often watched the female bird when hatching her eggs, and that Eagles build at this date yearly on the coast lying between Benwee Head and Downpatrick Head; the cliffs of Porturlin being often chosen as a nesting-place.

Mr. R. Lloyd Patterson, of Belfast, informs me that he is not aware of any Eagles in the north

of Ireland, except in Donegal, where, on two estates which he mentions, the Golden Eagle may still be seen.

In the first week of December, 1881, a keeper, near Listowel, saw a Golden Eagle stoop at a Woodcock as the latter darted into a thick covert. The Eagle followed and was captured, unhurt, entangled in the underwood and unable to rise or use its wings. This bird was kept alive for some time, but showed great fierceness, and, refusing all food, at length died of starvation.

A friend of mine once shot a Cock in co. Kerry that fell across a river. After some hesitation, he determined to ford the stream to secure the bird. When half-way across, a Buzzard swooped down and, without minding his shouts, began to tear it to pieces. The shooter was now some twenty paces distant from the scene. Suddenly, with the rush of a storm, a dark ball descended. The Buzzard left in haste, for the king of his race had appeared, and, in an instant, bore away the Cock in his clutch. The wetting, though on a bitter winter's day, was forgotten in the excitement of the grand sight witnessed.

The tail of the Erne, or White-tailed Eagle, is rarely perfect, but instead, bruised and discoloured, and often much worn. The Golden Eagle, on the contrary, is seldom found to have its tail-feathers damaged or imperfect. This seems to show that the former often rests and feeds on level, soft ground, such as borders the sea; the latter preferring rocks and ledges on which it can perch dryshod, and without injuring tail or wings.

The distinctive marks by which to tell these two Eagles apart at any age is by the leg and foot. The legs of the Golden species are feathered down to the toes, the Sea Eagle showing part of the shank bare. The surface of the toes in the former bird are covered by very small scales, in the latter by large ones.

Mr. Pike, of Achill, had a tamed Golden Eagle in his possession for twenty-six years. It was taken (in 1854) as a young bird from the nest. After being twenty years a captive, it laid two eggs. These were removed and goose's eggs substituted, which the Eagle hatched, tenderly guarding the young, feeding them on meat torn from the crows, rabbits, and rats placed in her cage.

One morning Mr. Pike found that a wild Eagle of the same species had burst through the bars to the prisoner, and it was set free with much difficulty. The bird did not fly away, but rested on a small mound near for some time. On another occasion a wild Eagle was found at daybreak in the same cage by the keeper.

In warm bright weather Eagles are inactive, and do not show as when the day is wild and boisterous, when they wheel continually through the sky, and appear to glory in braving the tempest.

THE OSPREY (*Pandion haliaetus*), although an uncommon bird, is yet to be met with now and then on various parts of the Irish coast. I have several times been interested in observing one of these birds fishing. They do not stoop and snatch up a fish, scarce wetting themselves, as I have read is their habit. I have seen them fall like stones

into the water, and flap several times with the wings ere they could rise, dashing the spray high in the air when making a plunge. The head is bent back just as the bird meets the water. It indeed seems to take aim, and then clutch a fish by guessing its position when close upon it. Its feet are admirably formed to do this, as the toes radiate from the leg, so as to bend round an object in whatever way the bird drops on it. I have seen an Osprey make three false stoops in succession, after which it flew slowly away, as if disheartened, to rest on a rock. This occurred on a very bright day, with a calm clear sea, and the bird must have been deceived as to the depth at which its wished-for prey was swimming. An Osprey will hover over the surface of sea or lake, when in search of food, as still as a Kestrel looking for mice in a stubble-field. Then comes the sudden dart downwards with partially folded wings, and for the moment the bird is lost to view in the spray caused by the fall. The breast of an Osprey and the under side of the wings, and especially the legs, are closely set with feathers, as in the plumage of a Diver, and almost as water-resisting. Ospreys have longer legs in proportion to their bodies than have other birds of prey. This provision enables them to dip their feet deep into the water after a fish when occasion requires it. The under surface of the toes is as rough as a file, and prevents any chance of their prey slipping.

Mr. Ross, of Killarney, tells me "that though Ospreys are often seen hovering about the Lakes of Killarney, they are very rarely shot."

Ospreys were unusually numerous in Ireland in

the autumn of 1881 at the period of their migration. As many as a dozen were recorded to have been shot in a month, and three I saw in the flesh in one county alone (Cork).

An old fowler living near Dingle Bay, co. Kerry, assured me he was watching one calm bright evening in autumn near his house on the shore a pair of the small Sea Eagles (*i.e.*, the Osprey) fishing. One of them struck at a fish; the prey was either too large, or the bird, in struggling to rise, soaked its plumage more than usual. The fowler on seeing the Osprey beating violently on the water, and knowing its value, ran for his gun and quickly launched a boat. When he was almost within shot, the other Osprey, the fellow of the one in the water, swooped down and struck at its helpless companion, and lifting it by the back, enabled it to use the wings freely and join its deliverer in the air. Whether this act was done with a charitable intention, or with malice, can only be guessed; but from the graphic description of the disappointed shooter, I have not the least doubt the incident occurred as he described it.

So far as I am aware, the Osprey has never been found nesting in Ireland.

THE KITE (*Milvus regalis*) is very rare in Ireland. I have shot, or indeed seen, but one. In the winter of 1880-81, I noticed a large bird, which I at first thought was a Falcon, pounce down on a Teal I had wounded, and which had dropped in the water near the mouth of Cashen River, co. Kerry. It endeavoured to snatch the bird off the surface without success. It then flew round,

but out of shot, in swooping and almost wing-motionless curves, the tail first slanted this way then that, as it acted rudder to the bird's flight. Meantime it uttered, without ceasing, the piercing scream so well known to residents in India, and which to me would alone have indicated its species had I not seen the forked tail. The next day I was passing the same spot, when up sprang the bird from behind a rock within a few yards of me. I fired and killed it, and it proved to be a young male Kite, the only specimen I ever personally saw in Ireland.

THE COMMON BUZZARD (*Buteo vulgaris*), although not numerous as a species, is generally to be found in suitable localities, and not only amongst rocks overhanging inland lakes, but also in cliffs facing the sea. The ROUGH-LEGGED BUZZARD (*Buteo lagopus*) and the HONEY BUZZARD (*Buteo apivorus*) are both of extremely rare occurrence in Ireland, the latter being an occasional visitor in summer.

THE MARSH HARRIER and HEN HARRIER (*Circus æruginosus* and *C. cyaneus*) both occur in Ireland, and are believed to be pretty generally distributed; building on the ground in marshes and mountain bogs.

THE PEREGRINE FALCON (*Falco peregrinus*) nests on most of the bold headlands and rocky islands of the Irish coast, and now and then inland. Still these birds do not increase in number, although they yearly bring out their young in safety in many inaccessible cliffs. I know at least a dozen spots where I have seen a pair of these birds breeding annually for several years. Yet, year after year, if not the same

pair, another will choose the favourite spot and there nest. The next couple may be some miles distant, the third yet farther, and all will, perhaps, safely rear their young. Nevertheless there is no apparent addition to the number of nests. The same spots recollected as breeding haunts by old men in their youth are still occupied by their pair of Falcons, the nearest headland in the same way, and so on all round the coast. What becomes of the young? they are seldom taken, and the only way to account for it is to lay the murder at the door of the Great Black-backed Gull. A similar coincidence may be noticed with regard to Ravens; they neither increase or diminish, though in certain places the latter rear their broods in security every year. A pair of Falcons are fond of appropriating some lonely rock, where they take up their quarters among the sea-fowl, the best of which they take for themselves and their brood, keeping the unhappy sea-birds, as they continually soar over them in the nesting season, in constant dread and apprehension.

Mr. Dillwyn tells me that Peregrines are numerous along the north coast of co. Mayo, and Mr. Warren, of Ballina, says that in his district this Falcon is common, and breeds in the cliffs. He has often seen them prey upon Curlews, and even rescued them from their clutches. On the day these birds of prey come down to the sands, sport with the gun, in his experience, is over. Wigeon, Curlews, and Plovers are at once on the alert, and the last-named will keep on the wing for hours, at an immense height, if once disturbed by a Falcon.

As the spoiler flies by, the Wigeon leave the banks and huddle together at sea. Mr. Warren says, he once witnessed an interesting flight by a Falcon after a Green Plover. It resulted in the latter becoming so utterly exhausted, that it pitched on the water and swam about endeavouring to escape. But the Falcon was not to be thus cheated of her prey, for she gradually lowered her flight, and poising herself with fluttering wing, extended her feet, and daintily picked the unfortunate Plover off the water without wetting a talon.

Both the GREENLAND and ICELAND FALCONS (*Falco candicans* and *F. islandus*) have been occasionally met with in Ireland, but must be regarded as very rare and irregular visitors. Thompson has recorded a Greenlander killed many years ago in Donegal, and subsequently a second in the same county, obtained at Drumhoe Castle. A third, procured at Belmullet, in the winter of 1868, is preserved in the Museum of the Dublin Natural History Society.

In April 1875, one was shot at Killala, co. Mayo, and was preserved for Lieut.-Colonel Knox, of Castleréa. And Mr. Gage, of Rathlin Island, has one which was shot on the island in March 1866.

Mr. Gage, himself an ornithologist, writes:—
“Some years ago I was sitting on high ground in the island, when I saw this bird fly overhead. By its flight I knew it to be a hawk, and from its size and white plumage I judged it to be the Gyr, though I had never seen one. I gave my men particular instructions to watch it, and a few days later it was killed by the shepherd in charge. Its measure-

ments were—extreme length, twenty inches ; wing, from carpal joint, fourteen and a half inches.”

Mr. Lloyd Patterson visited the Copeland Islands on purpose to verify the statement of Williams, the keeper, that he had a Gyr-Falcon, obtained on the rock. Williams had previously stated to me : “ The Gyr-Falcon I shot was quite white, with black bands across wings and tail. Another was killed by my companion two days after, with a stone, in the act of eating a rabbit. It was a duller white than the first, and the black was not so bright. When I first saw the bird I thought it was a Seagull, as it was so white.” This description seems to indicate that the species was the Greenland Falcon.

In the autumn of 1877 a Greenland Falcon was caught alive by a farmer, in a warren on the north-west shore of the entrance of Lough Foyle. It had gorged itself on a rabbit, and permitted a capture to be made without difficulty. It was kept alive for two or three days on raw beef, and then died, when the skin was preserved, and subsequently forwarded to Mr. Harting for identification. It is now in the British Museum.

Mr. Richards, of Barnagh, Belmullet, has an Iceland Falcon preserved which was killed at Tarmoncarra, in September 1879 ; and another Irish example of this bird, in immature plumage, is in the possession of Dr. Burden, of Belfast. It was obtained, in Donegal, by the late Mr. T. Garrett, of Belfast, in August 1859.

Amongst the smaller hawks, the KESTREL and SPARROW-HAWK are generally distributed, the former being the most numerous.

THE MERLIN (*Falco æsalon*) is a resident, breeding on the ground amongst heather on the mountain sides. In co. Mayo it is a common species, more so than elsewhere in Ireland.

THE HOBBY (*Falco subbuteo*) is a rare summer visitor to Ireland, and not more than half a dozen instances of its occurrence have been recorded. A summary of these will be found in *The Zoologist* for 1877, p. 471.

Thirty years ago Thompson observed, "THE GOSHAWK (*Astur palumbarius*) cannot be included in the Irish Fauna with certainty." Since that date, however, two or three undoubted instances of its occurrence have come to light.

In a note by the late Dr. J. R. Kinahan, in his annotated copy of "Jardine," it is stated that a Goshawk was shot at Kilruddery, in 1844, by Lord Meath's gamekeeper; to which observation Dr. Kinahan added the words, "I have seen it fresh."

In January, 1870, an adult female Goshawk, preserved in the collection of Sir Victor Brooke, was shot in the Galtee Mountains, co. Tipperary.

Of OWLS, the White, or Barn Owl, is the commonest, and the Long-eared Owl inhabits old wooded districts in all parts of Ireland. The Tawny Owl, if it occurs at all, must be regarded as either very rare, or extremely local. As a winter visitant, the Short-eared Owl appears regularly in Ireland. Amongst the rare stragglers which have occasionally been met with, may be mentioned the Scops Owl, the Eagle Owl, and the Snowy Owl, the last-named of which has occurred several times.

CHAPTER XVII.

Notes and Observations on Irish Mammals—Red-deer and Fallow-deer—Roe-deer—Wild-goat—Fox—Marten—Stoat and Weasel—Wild-cat—Squirrel—Otter—Seals.

ALTHOUGH it may seem somewhat out of place to refer to *quadrupeds* in a work devoted to *wildfowl*, several reasons have induced me, when looking over my journals, to extract, and arrange for publication here, the notes which I have made relating to wild animals in Ireland, which are of special interest to the sportsman, and hardly less so to the naturalist.

Some of these are now becoming rare, or at least may be said to be very local, and as comparatively little has been published regarding their distribution and haunts in Ireland, it may be well to place on record such information concerning them as I have been able to pick up in the course of my fowling excursions.

The Red-deer, now restricted to some of the wilder parts of Kerry, must at one time have been generally distributed throughout Ireland. Giraldus Cambrensis, in his "Topographia Hibernica" (1183-1185), includes it amongst the beasts of chase; and Fynes Moryson, Secretary to Lord Mountjoy when Lord Deputy of Ireland (1599-1603), refers particularly, in his "Description of Ireland," to the

Red-deer "loosely scattered" in many woods belonging to the Earl of Ormond, in Munster; and the Earl of Kildare, in Leinster.

Lord Deputy Strafford, in Charles the First's time, as appears by a letter of his to the Archbishop of Canterbury, seems to have enjoyed himself in leisure hours, as he says, "in the country of mountains and woods, hunting and chasing all the outlying deer I can light of." O'Flaherty, in his "*Chorographical Description of West or H-Iar Connaught*," written in 1684, bears testimony to the existence there at that date of Red-deer, amongst other wild animals.

In less than a century later they were remarked to be gradually getting scarcer, and fears were expressed of their approaching extinction. Thus Dr. Charles Smith, in his "*History of Waterford*" (1746), writes:—"In the mountains of Knockmealdown, we have some remains of the Red-deer, but so few, that it is to be feared the species will in a few years be extinct, especially if a little more care be not taken of them."

A second edition of this work was published in 1774, in which year a disputed question of boundary on these very mountains gave rise to a suit between the Duke of Devonshire and Lord Cahir. In the course of these proceedings the evidence of some of the witnesses, now a matter of record, is very interesting, as confirming the alleged existence of Red-deer in this part of Ireland at that date. Through the kindness of Mr. F. E. Currey, for many years agent to the Duke of Devonshire, my friend, Mr. R. J. Ussher, has been enabled to sum-

marize this portion of the evidence, which he has printed in some interesting "Notes on Irish Red-deer," in *The Zoologist* for March, 1882.

In 1772 Dr. Ruty published, in two volumes octavo, his "Essay towards a Natural History of the County of Dublin," in which it is stated that "the Stag, Hart, or Red-deer, is found here, although much rarer than the *Cervus platyceros*, the Buck or Fallow-deer, whose horns are palmated."

In the Rev. George Sampson's works on Londonderry (1802-1814), "the native Stag or Red-deer" is noted as having "formerly existed" in that county, but at that date "extinct." In the co. Donegal, also, it is said to have been formerly abundant on the mountains adjacent to Lough Esk.*

When Thompson was collecting information for the fourth volume of his "Natural History of Ireland," containing the Mammalia, which was not published until 1856, or four years after his decease, he wrote of the Red-deer:—"This species, once abundant over Ireland, is now confined to the wilder parts of Connaught, as Erris and Connemara; and to a few localities in the south, more especially the vicinity of the Lakes of Killarney. When on a tour through the West and South of Ireland in the summer of 1834, I was informed that there were at that time only twenty-five Red-deer in Connaught—thirteen of these in Connemara, and twelve in the barony of Erris. My informant added that, in the previous year, two full-grown animals (one a stag) were shot with one ball.

* "Camden's Britannia," ed. Gough, iii. p. 644.

Dr. Harvey, in a letter dated 6th October, 1840, remarked that the Red-deer was, and I believe still is, in small numbers, in the Galtee Mountains, co. Tipperary." The late Lord Lismore, of Shanbally, who died in 1857, often spoke of having seen the last Red-deer that was killed in these mountains. Lord Bantry's gamekeeper, George Jackson, at Glengariff, stated in 1850 there were some Red-deer there.

Thompson evidently considered that at the time of penning his own remarks the Red-deer was extinct in Donegal.

Mr. Richard Glascott Symes, of the Geological Survey of Ireland, has been at some pains to collect information regarding the last Red-deer in Erris, and thus relates the result of an interview which he had in 1874 with an old man living at Nephin More, ten or twelve miles east of Nephin Beg, who well remembered the deer there. He says :—" Old Tom Daly, of Nephin, is seventy-eight years of age, and is as hale and hearty as I am at thirty-four, and has wonderful retentive powers as to things that happened years ago ; still, of dates he is ignorant, always marking the time a thing happened, not by the year, but by some remarkable transaction, such as the year of the great snow, or the year the big smuggler came into Achill. From careful questioning, I elicited the following, of which he has not the slightest doubt as to the accuracy : —The last deer he saw was in the Valley of Dorragha, which lies between Newport and Nephin, and opens towards the east. Two were seen here, and this was during the year of the big snow, which

I believe was in 1834. Seven years before that time, he saw the Lord Clanmorris of that period shoot two at Altnabrocky, a hind quarter of which he gave to Daly. The Queen Anne gun and those of 1798 did an immensity in the way of extirpating deer, still all sorts of devices were employed, such as hunting the deer, when the animal always took some favourite pass near a morass or lake, in which were placed upright stakes made of holly, which were hardened, and retained the fine-pointed top placed on them for some time. Several deer got staked by this means. Another way was for the whole country to turn out with dogs, &c., and drive the mountains. One run was calculated as sixty miles. When started from Corslieve, the deer generally took to the low grounds, making for the tarns and morasses, and finally running to Nephin. Daly saw a hound follow a stag for more than an hour, which it succeeded in overtaking after swimming a lake. The stag here with one blow killed the dog, which was considered a famous one. The largest number of deer he (Daly) ever saw together—but only once—was seventeen; several times he saw five together. As Daly's family have lived in these glens for generations, he was always on the move from one relation to the other, consequently knew exactly where most deer were to be found. During snow was a great time for following the deer. I think I have now told you all that Daly told me. He had seven stags' heads, which he made a present to Robert Brigham, of Dublin, who was accidentally shot by Mr. Knight, the county surveyor, when looking at pistols." Mr. G. T.

Macartney, of Avonmore, Ballybrenk, to whom this information was imparted, says that this, coupled with Colonel Whyte's note, which appeared in *The Field* in June, 1874, as well as the remarks in Maxwell's "Wild Sports of the West," written in 1832, induces him to think that 1834, or 1835, was the date at which the ancient stock of deer formerly abundant in the wilds of Erris, were nearly if not quite extinct.

But although Red-deer became scarce in Erris, their last resort in the county of Mayo, some years previous to the "Irish Famine" (1846-47), I have several undoubted proofs from gentlemen now living that a few roamed over the more solitary mountains up to that date, when those then existing were hunted down with desperate energy by the hunger-stricken hill-men. In Achill they were extinct long before, but the sharp neck of high land that connects Achill Head with the rest of the island is still pointed out as the spot where "Brian," a famous deer-killer, used to catch these animals in a pit-fall as they wandered, or were driven by him, over the narrow ridge alluded to. The last year of the famine (1847), a magnificent Red-deer, that by battle or gunshot had lost an eye, frequented a high mountain near Mulranny, in the Ballycroy district. His sleek, well-fed form was now and then scanned with longing eyes by the starving peasant. Many a watcher hid in vain for the chance of a shot. At length, one misty dawn, man and beast unexpectedly stood face to face on a high peak. The wished-for prize stood so large and near, that the too anxious hand trembled, the

charge of buckshot but grazed the forehead, unhappily destroying the remaining eye, and no more. The blind and terrified animal for one instant paused in its sudden darkness, the next dashed madly through the fog. Weeks after, his grand antlers and bleached skeleton were found at the foot of a precipice hard by, the foxes and eagles having alone benefited by his cruel death. So miserably perished probably the last of his line in Mayo.*

A few years previous to this incident a stag and two hinds established themselves on the property of a large proprietor near Belmullet, who took great pride in his visitors, and carefully protected them, as did the neighbouring gentry. But their hopes of reviving these animals were rudely dispelled. A large deep drain was in course of construction through the bog near, and the deer were one day trapped in a corner by the labourers engaged in cutting it. The stag and hinds, in attempting to leap the excavation as a means of escape, fell in, and were, to the regret of all interested, cruelly mobbed to death with fork and spade!

The late Sir A. Knox-Gore reported some years since that he had seen the slot of a Red-deer hind and fawn at Currawn, co. Mayo, in 1852.

In a letter which I lately received from Mr. R. Glascott Symes, to whom I have already referred, he says :—"An idea has gone abroad that they (the Red-deer) are not extinct *yet*, but this is fallacious; the animals seen now are those which

* I have seen a seal made from a tine of one of the antlers and mounted in silver, with an inscription recording the death of this animal.

have escaped from Castlereagh demesne, and I have seen them myself. One or two get away every year, and are generally mobbed when they get to the mountains. I know of one killed in Claremorris in 1875, one at Ballycastle the same year, and there was one in Sir Charles Gore's demesne near Ballina in the winter of 1875."

It is now in Kerry only that this fine representative of the ancient Fauna of Ireland may still be seen. In this county the old *original* stock of Reddeer is *still* maintained by Lord Kenmare and Mr. Herbert of Muckross, whose deer forests adjoin; and, with the exception of five stags brought from the co. Roscommon some years since, no admixture with the original stock of Kerry has taken place.

Previous to the year 1842 the poor beasts had been much persecuted and hunted down, in consequence of their being considered destructive to the young plantations. About that date, however, this persecution was fortunately checked, and, under strict surveillance, the survivors increased, and there is now a good stock. Mr. Ross, of Killarney, for many years head forester on the Muckross estate, in reply to my inquiries, writes:—"They are now very numerous, being strictly preserved by both Mr. Herbert and Lord Kenmare, whose forests adjoin. The weight of the heaviest killed on the Muckross estate was $31\frac{1}{2}$ stone, and several of from 28 to 30 stone. Many of the same weight are still in the forest, and their numbers are increasing yearly."

In answer to my further inquiry whether the unusual weight of 31 stone was the net weight after

being gralloched, or not, Mr. Ross replied, "Every stag killed on the Muckross estate is gralloched, and the inside thoroughly cleaned out, *where it is shot, on the hill*, and the animal is not weighed until carried home. It is the weight *clean* that is always entered in the game-book." He adds: "The heaviest killed last season (1881) weighed 27 stone, but whilst Woodcock-shooting last winter I saw a stag that I am sure must have weighed over 30 stone, and which is still alive."

THE FALLOW-DEER, although not indigenous to Ireland, has long been known in that country as an introduced species. The precise date of its introduction has not been ascertained, but it was apparently unknown there when Ranulphus Higden, who died in 1363, wrote his "Polychronicon." From a passage in Moryson's "Description of Ireland" (1599-1603), it would seem that Fallow-deer were not imported into Ireland until the latter half of the sixteenth century. For that writer observes:—

"The Earl of Ormond, in Munster, and the Earl of Kildare, in Leinster, had each of them a small park enclosed for *Fallow-deer*, and I have not seen any other park in Ireland, nor have heard that they had any other at that time. Yet in the woods they have many *Red-deer* loosely scattered, which seem more plentiful because the inhabitants used not to hunt them, but only the governors and commanders had them sometimes killed with the piece. They have also about Ophalia and Wexford, and in some parts of Munster, some *Fallow-deer* scattered in the woods: yet in the time of the war I did never see any venison served at the table, but

only in the houses of the said Earls and of the English commanders."

At Raheen Tomgraney, co. Clare, a royal deer park was granted to the representative of the Brady family, who held it by the tenure of furnishing a certain number of bucks annually for the royal table ; and it was a felony punishable with death to steal a deer out of this park. The estate was sold about twenty years ago in the Irish Encumbered Estates Court, when, I believe, a new title was given.

There are now, of course, herds of Fallow-deer in many parks in Ireland, and it is not an uncommon thing for individuals to make their escape, and remain at large for a considerable time until they are killed, it being impossible to get them back. Thompson was informed in 1850 by a keeper of Lord Bantry, at Glengariff, that there were a great many Fallow-deer at large throughout the woods and on the mountains in that locality. They had then become so numerous as to be very destructive to the plantations, and a good deal of his time was occupied in shooting the does.

At the present day Fallow-deer roam unchecked through many counties of Ireland in a wild state, though originally truants from preserves. In counties Galway and Clare, and across the Shannon, every large cover holds its two or more. In the spring they descend at night from the woods and uplands, and make sad havoc in the gardens of the peasantry. They are especially numerous near Clonmell, on the Waterford side of the River Suir, having originally escaped some time ago from the

deer park at Gurteen (Count de la Poer's), and they now roam the Commeragh Mountains in great numbers.

The landed proprietors in that district, to whose plantations they do considerable harm, estimate their numbers at, at least, 500 within a radius of a dozen miles of Clonmell. A dish of deer's kidneys is not an uncommon delicacy in the proper season at the tables of the gentry in the district.

In 1845 some Fallow-deer were turned out on Deer Island, co. Galway, by Mr. Martin, the son of the famous Colonel Bell Martin, of Ballynahinch, in that county; but although they have increased and are quite wild, they have sadly degenerated for some years past; and when I last heard of them, in October, 1881, it was in contemplation to introduce some fresh blood by new importations. The original stock, as I learn from the keeper, W. Blackadder, were brought from the co. Roscommon.

THE ROE-DEER is unknown in Ireland, nor have any remains of this animal been discovered to prove that it was ever indigenous there. But if any spirited proprietor would be at the pains of importing some, there is no reason why they should not thrive there as they do in many parts of Scotland, and in the south of England—where, in Dorsetshire, they were reintroduced at the commencement of the present century.

THE WILD GOAT, although strictly speaking not indigenous to Ireland, may be here alluded to as an animal of some interest to sportsmen and naturalists. They exist about the wild cliffs of Dingle Bay, co. Kerry, and there are some fifty to sixty of these

animals in Achill. Their origin is lost in obscurity, but doubtless they were, originally, wanderers from the villages. They are snow white, with long drooping coats, soft as silk, and the head of an old male is very handsome. They never leave the cliffs, except in the time of deep snow, when they visit the neighbouring heather. They are shy in the extreme, and I have seen them dotted about the precipices where I thought no living creature, not even a chamois, could venture. They are very hard to get within shot of, even with a long-range rifle; and, if shot, the chances are they could never be recovered, by reason of their inaccessible position. They browse on the small sweet patches of grass intersecting the rocks.

THE FOX is so numerous and so well known in Ireland as scarcely to deserve special mention, but I may refer to it here for the purpose of refuting a popular fallacy regarding the mode in which this animal carries off its booty when killed. I have, at different times, seen a Fox running off with a Duck, just taken from her nest; and, contrary to the prevailing idea, he does not throw his prize *over* his shoulder as he trots along, but carries his head and neck high, while the bird he has taken dangles against his chest. A Fox was seen by a friend of mine to bear away even a Goose in this fashion. We all know the well-known picture of a Fox cantering at break of day from a farmyard with a Duck slung across his neck and back—a position he could not possibly keep it in. I have already alluded (p. 69) to the damage a Fox will do in a decoy if left to his own devices. However much

he may furnish sport to the huntsman, he cannot be regarded as a friend to the fowler.

THE BADGER holds his own in many parts of Ireland, and in some of the wilder districts, if looked for, would probably be found to be almost numerous. The retired nature of his haunts, and his nocturnal habits, no doubt cause this animal to be often overlooked. I have notes of the occurrence of the Badger in the counties Kildare, Wicklow, Clare, Leitrim, Sligo, and Donegal, and I believe it is tolerably common in the Mourne Mountains, co. Down. In co. Galway I have seen as many as five and six in one field at day-break in summer.

THE WILD CAT, according to Thompson, cannot be included with certainty in the Irish fauna, and I have failed to obtain any positive evidence of its occurrence in any part of Ireland. It is true that I have, from time to time, received reports of one having been killed, as for instance from the Scotch keeper at Ballynahinch, co. Galway, who informed me in October, 1881, that a *Scotch* Wild Cat had been killed on that property about ten years ago. But in no case, that I am aware of, has the animal thus designated been preserved and submitted for inspection to competent authority, and there can, I think, be little doubt that the so-called "Wild Cats" killed in Ireland have been merely tame cats which have run wild, or have been bred in the woods from domestic ancestors, which have themselves been for some time at large.

That beautiful animal THE MARTEN (*Martes sylvatica*) must at one time have been abundant and

generally distributed in Ireland, and at the present day in some districts is still not uncommon. In former times it was much sought after for the sake of its fur—as, indeed, it is now in various parts of the country—and this, no doubt, has contributed in some measure to its gradual scarcity, and ultimate extinction in localities where it once abounded. Of late years its chief enemies have been game preservers and their keepers, who seldom or never lose an opportunity of shooting or trapping it. Notwithstanding this persecution, there are many wild districts in Ireland where Martens still hold their own, especially where portions of the ancient forests yet remain, among which may be specified Ballykyne, near Cong, co. Mayo, and Kylemore, Connemara, co. Galway.

In the neighbourhood of Killarney, more especially near Lough Carragh, and in other parts of Kerry, they are still fairly numerous; and they are also to be found in the woods and crags near Loughs Mask and Corrib, in Mayo and Galway.

In the latter county, some twenty years ago, they were considered quite a plague on the Tomgraney estate, where they were preserved by the owner, an Englishman, who had then recently purchased the property. Amongst other localities in Ireland where the Marten still exists may be mentioned the woods of Desart, co. Kilkenny; the Mourne Mountains, co. Down; various parts of Leitrim, Sligo and Donegal (Colonel Whyte); at Castlebar, co. Mayo (W. Garnett); at Ballynahinch, co. Galway (W. Blackadder); and in Wicklow (A. B. Brooke). In one year (1870) Mr. Glennon, the taxidermist of Dublin, received no less

than thirteen Martens from different parts of Ireland for preservation. Not one of these had the white breast, which is characteristic of the Beech Marten (*Martes foina*); and it appears to be now the general opinion amongst naturalists that the Pine Marten (*Martes sylvatica*) is the only species of this genus which occurs in the British Islands.

THE STOAT is well known to game preservers in many parts of Ireland, but THE WEASEL, it is said, does not occur there. The former animal may always be known by its larger size and by the black tuft at the end of the tail, which appendage is also *longer* than in the Weasel.

Any reader who may have the opportunity of securing an Irish-killed specimen of the true Weasel (*Mustela vulgaris*) will render a service to zoological science if he will forward it, for examination and report, either to the editor of *The Zoologist* or of *The Field* newspaper.

It is somewhat remarkable that, besides the Weasel, the following animals, well-known in other parts of the British Islands, are absent from Ireland, viz., the Mole, the Dormouse, the Harvest Mouse, the Short-tailed Field Vole, and the Bank Vole. Several species of Bat, also described as British, have not yet been detected in the sister isle.

THE SQUIRREL, which in some parts of Ireland is numerous and increasing, is thought to be not originally indigenous, but to have been introduced at no very recent date, and to have extended its range from different so-called "centres of introduction."

Mr. R. M. Barrington, who has been at considerable trouble to collect statistics on this subject, has

published an interesting paper "On the Introduction of the Squirrel into Ireland," which will be found in the "Scientific Proceedings of the Royal Dublin Society" for May, 1880.

On looking at the map which accompanies this paper, and which illustrates the present distribution of the Squirrel in Ireland, it may be remarked that there are only three or four patches of country in which the animal is found, and these chiefly in the centre and east of Ireland, with a few scattered districts in the north. In the north-west, west, and south of Ireland it appears to be quite unknown. Thus, in the centre of Ireland, the counties in which it occurs are Longford, Westmeath, King's County, and the eastern border of Galway; in the east, Dublin, Kildare, Wicklow, and parts of Carlow and Wexford; in the north, parts of Antrim, Derry, and Tyrone, and one or two spots in Down and Armagh.

In several of these counties the history of the Squirrel's introduction is known, and will be found detailed in Mr. Barrington's paper above quoted, in which also the reader will find much to interest him regarding the mention of this animal in the works of early writers on the history of Ireland.

THE OTTER, although by no means free from persecution, is not uncommon in many parts of the country, especially in the rivers and lakes that lie near the west and south-west coasts of Ireland. In some places, indeed, it is said to be on the increase, owing to the measures now adopted to preserve fish in rivers and to the withdrawal of rewards for otters' heads. A good number evidently are shot or trapped

every year by keepers, and newspaper paragraphs announcing the destruction of otters in various parts of Ireland are of frequent occurrence. I have known Otter hunters in Ireland who have spent their lives trapping these animals for the sake of their skins, and who believed in the existence of a very large species called by them the "King of Otters," or "Master Otter." But a fine otter might measure 2ft. 6in. from tip of nose to end of tail, and weigh, say 25lbs. There is a white Otter in the Belfast Museum which was shot at Islay in April, 1850.

SEALS, both the common (*vitulina*) and grey (*gryphus*), are common on many parts of the Irish coast, more especially on the west and south-west.

On the coast of Kerry the country people take their annual crop of Seals, as they do of potatoes or turf. They swim into the caves and club the young as they rest on the shelving ledges of sand or rocks. Smith, in his "History of Kerry," 1756, writes, "Seals are taken in caverns, particularly the young, on moonlight nights. The old ones fight and bite furiously. They never let go their hold till they hear whatever they fasten on crash between their teeth. For this reason the seal-catchers have bags fixed on their limbs with charcoal quilted in them." This was a common practice among Seal-takers within *recent* years. Seals, on being struck by a bullet, always sink when *wounded*, and not invariably, as is commonly supposed, when killed. I have shot Seals through the brain, and found, whenever so killed, if fat (as are the females or young), they never fail to float fully four minutes ere sinking, but an old bull goes down at once.

They do not rise for eight to ten days. A Seal is easily tamed, and, like an Otter, will follow its master when water is convenient. Lord Ventry has a tame Seal at Dingle that swims beside his boat when sailing about the harbour in summer.

On the west coast of Ireland five to a dozen Seals may be seen together—the smooth banks of a small island or the shelving shingle at the head of a cave being favourite positions for them to rest on.

The cry of a Seal is sometimes startling in its resemblance to the human voice in distress; often have I heard them in the stillness of the night as they lay on the sand-bar behind which my vessel was anchored, and in fancy likened their mournful wails to ocean spirits wearily complaining of wreck and storm.

The largest Grey Seal ever recorded in Ireland, and larger than any in the Museums, is Mr. Nelligan's specimen, of which he has the skin; it measures, as I satisfied myself, from nose to end of flippers, nine feet four inches!

It is curious that most animals dread the smell of a Seal. I have known horses and cattle become instantly terror-stricken and unmanageable on the body of a Seal being brought to a house near them; and although Seal oil is excellent for leather and harness (keeping it soft and pliant), a gentleman I know had some applied to the traces of his shooting cart, in consequence of which nothing would induce first one and then another pony to be led between the shafts. The quietest horses will often become maddened with fear should a man who has been skinning a Seal approach them.

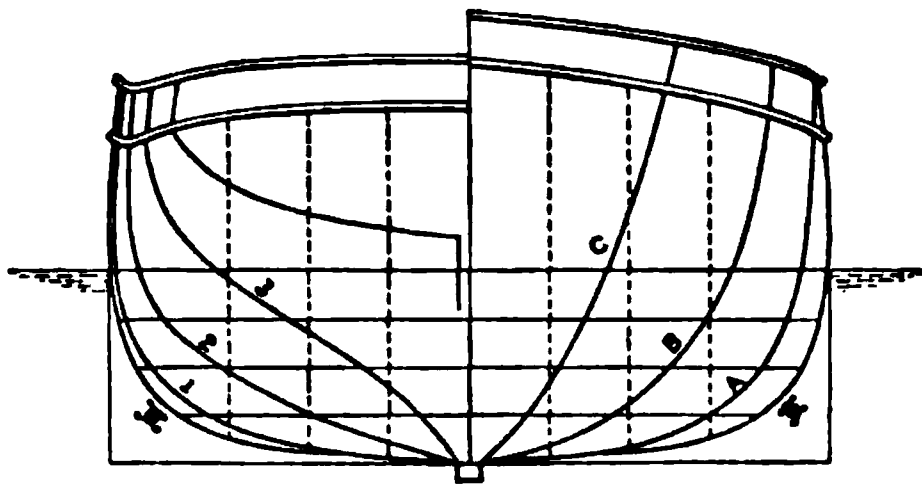
CHAPTER XVIII.

Wildfowl-shooting—Vessels, Yawl and Cutter—Punts, Double and Single-handed—with General Remarks thereon.

THERE are so many and opposite opinions as to the best and safest course to pursue when intending to pass a winter wildfowling, that I begin with hesitation. Some live ashore in a suitable locality, and are then, perchance, a fixture for the season; some hire a stout smack of easy draught, and fit her up with comfort, and even luxury; others, again, stow their smart canvas, paint everything they can for preservation, and appear in sober tan, thus turning their summer-sailing crafts into movable shooting-boxes. I consider the latter far the best method provided you have a proper class of vessel to start with. If you are a bad sailor, and fearful of a coast trip in winter time, no matter, send the vessel from place to place as required for shooting, and travel overland yourself; you then have the great advantage of a comfortable shelter at any spot you may fancy best for fowling. On the other hand, your friend with the house, snug though he may be, is tied down to one spot; he will surely frighten away all birds within his reach, and eventually have to row and sail a long distance ere he can hope for sport; whereas *you* have the power to appear at will in the haunts of

the fowl, and when no more sport in one place can be reasonably expected, as conveniently drop anchor in another.

Supposing the reader has not yet a craft of his own, and intends to build or hire one; let me advise him on the subject. He must first use his utmost endeavours to procure a vessel that will *take the ground*, hard or soft—almost, if pos-



MIDSHIP SECTION OF YAWL. Scale $\frac{1}{4}$ inch to the foot.

sible, quite upright. To be aboard a small cutter anchored in a large harbour, or estuary, is never pleasant in bad weather; a slight sea will pitch and roll her about when rest and comfort are most desired. What a luxury it is to be shoved in your craft right up on the slob or beach, no one knows except he who is tossing outside. In such a vessel you are always safe; no fear of anchor or chain giving; you can get into shallow creeks and enjoy perfect safety, though it blow great guns and the surge be roaring a few hundred feet away. She can be piloted into holes and corners most conveniently situated for shooting, and in waters where no recognized anchorages exist for vessels that must be kept afloat. Many

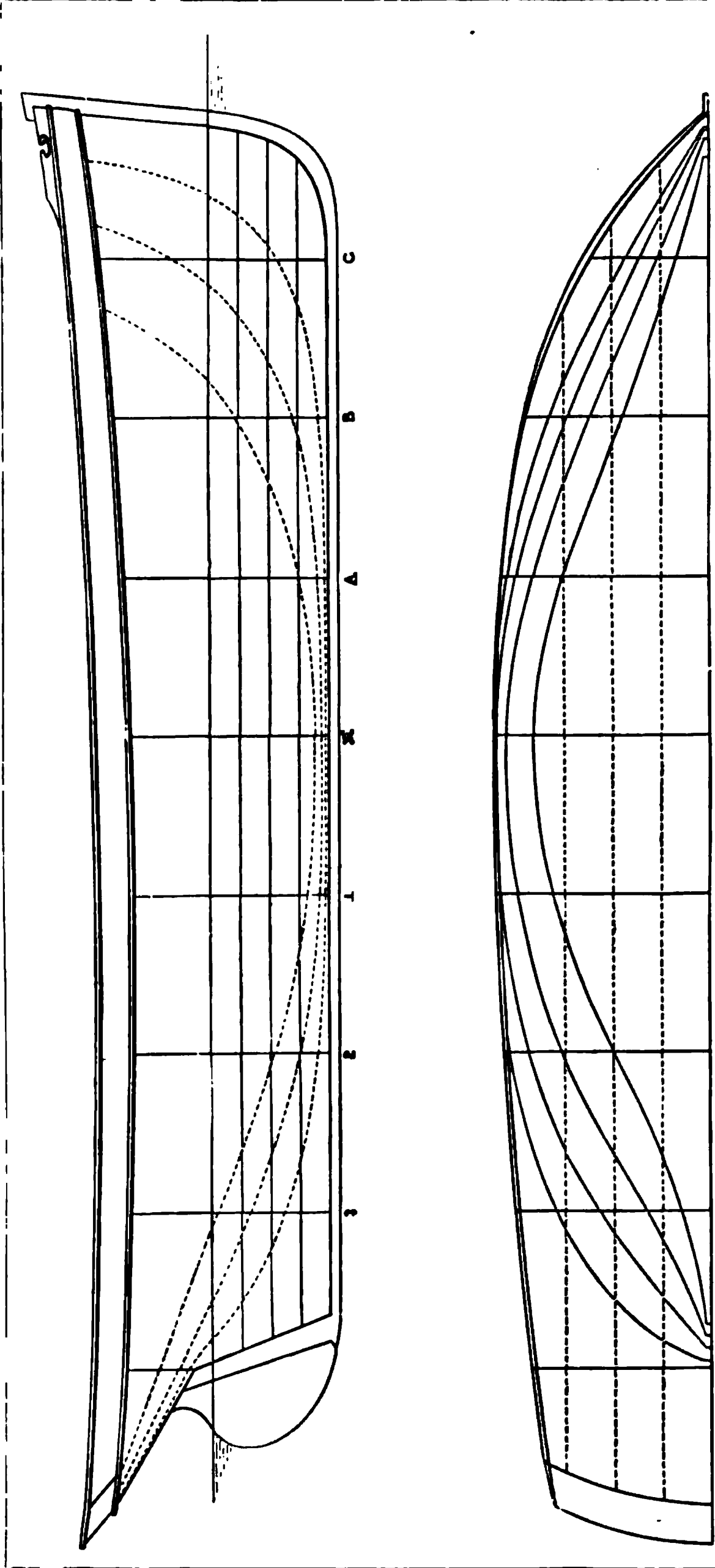


PLATE 10.] SHEER AND HALF-BREADTH PLANS OF YAWL FOR FISHING AND FOWLING. [P. 332.

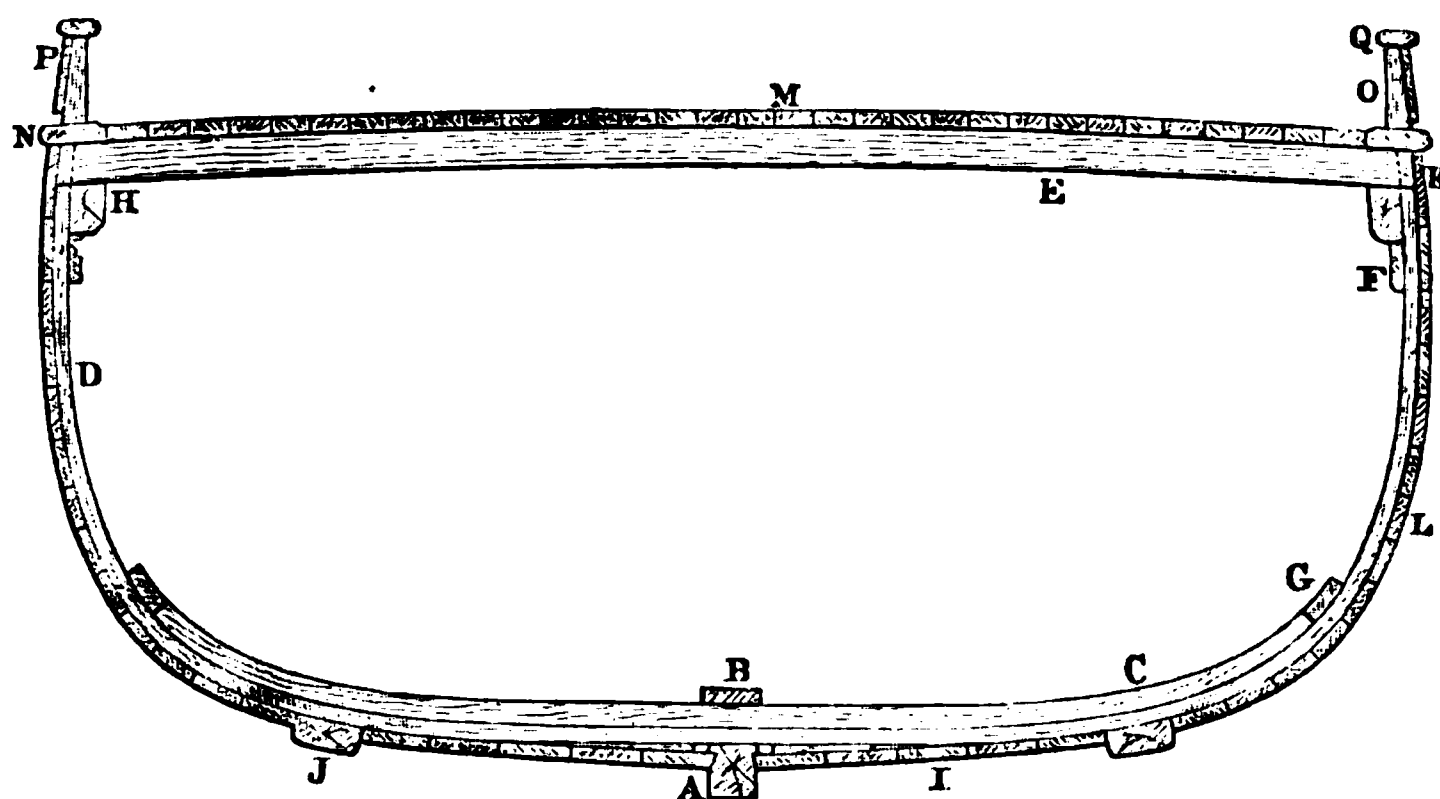
Scale, $\frac{1}{3}$ inch to the foot. Dimensions.—Length for tonnage, 45 feet. Breadth for tonnage, 15 feet. Depth from top of keel, 7 feet. Tons, Y. M. 35.

Designed by Forrest & Son, London.

yachts will stand up when left dry by means of legs or props on either side, but if the ground be soft the legs sink, and the position is then rendered unsafe. Besides which it is never pleasant to sleep in the angle caused by the sides and the deck. The yacht chosen should be flush-decked, without booby hatch or cockpit. She will then, though of moderate tonnage, carry a couple of duck-punts. She should, moreover, be undersparred and yawl-rigged. I prefer for choice a pole-mast: a top-mast and its gear, in a small vessel, is but so much lumber when she is intended for fowling. As regards the much-disputed point of yawl against cutter, for shooting purposes the former is to be preferred without doubt. It enables her to be worked with fewer hands, thus giving more space on board. She will be found handier in other ways, especially if a fair sailer—one that will go to windward with head-sails and mizen. She should not be under twenty-five tons v.m., or over forty. If too small, she will not carry the punts; if too large, she will probably draw too much water to get up the snug retired creeks and miniature harbours, near which the best shooting will always be found. The question of yawl and cutter rig has been so often discussed that little is left to say on the subject. All agree that a cutter will thrash to windward much faster than a yawl, and with adverse winds be far ahead in a week's voyage. If, however, a cutter has her main-boom cut off level with the taffrail, she will then about equal a yawl as to her general handiness and power. But we have here to consider the

two rigs entirely with respect to their suitability for fowling and cruising, and not as racers. For pushing about a large estuary under head-sails and mizen a yawl is perfection. Blow high or low, she can most conveniently tend on men and punt seeking their sport near at hand. She can be manœuvred by two men easily, and with perfect safety, though of thirty tons measurement, whilst her other crew are away in the punt or following boat. But whatever craft be chosen, let her be under-canvassed and light-sparred, if you wish for comfort when winter-shooting round the coast. And whatever her style, rig, or size may be, let her be so built that she will list but to a slight extent when left dry. The comfort, safety, and addition to your chance of sport such capability ensures is incalculable.

Your vessel may be fitted below neat and strong, but plain. Mirrors, pictures, bookshelves, gun-racks, and such movable and fragile furniture should be eschewed, for they swing, creak, and bump in every little sea. They are terribly in the way, and give no idea of comfort or convenience to a fowler. He would rather have polished panels reflecting the bright fire, and warm curtains than a hundred such gimcracks. The vessel, if a small one (as most are when built for shooting), should have two large cabins, one for living, the other for sleeping, and fo'castle for crew. The usual error made in small yachts is the division of the space below into minute and uncomfortable cabins, so as to lead a buyer into the idea that there is great room for size. One fair-



SECTION OF YAWL, WITH BUILDING DETAILS. (Not to scale.)

- A. Keel of American elm, 7in. deep by 6½in. wide.
- B. Keelson of American elm, 8in. wide by 2in. thick.
- C. Floors of English oak, spaced 3ft. apart, 6in. by 4in. at heel, 4in. by 4in. at head.
- D. Timbers of American elm, steamed and bent to shape, 3in. wide by 1½in. thick, spaced 12in. apart.
- E. Beams of English oak, 5in. deep by 3½in. thick, spaced 3ft. apart.
- F. Gunwale stringers of American elm, 6 in. wide by 2½in. thick.
- G. Bilge stringers, same as gunwale stringers.
- H. Shelves of English oak, 7in. by 4in.
- I. Planking—first five streaks on each side of keel—of English elm, 9in. by 1½in.
- J. Bilge strakes of American elm, 9in. by 4in. for half-length of vessel.
- K. Gunwale of American elm; 9in. by 1½in.
- L. Remaining strakes of pitch pine, 7in. by 1½in.
- M. Deck planks of pitch pine, 5in. by 2½in.
- N. Covering board of English oak, 9in. by 2½in.
- O. Bulwark stanchions of English oak, 3½in. by 3½in., tapering to 2½in. by 2½in.
- P. Bulwark plank of yellow pine, 1in. thick.
- Q. Rail, English oak, 5in. by 1½in..

sized cabin is worth far more than the three small ones it might be partitioned into.

I strongly recommend, in a moderate-sized cabin, a swing-table that may be moved away and replaced as occasion requires. It enables your friend and yourself to draw your folding arm-chairs up to the stove, and with cigar and grog, if so inclined, converse sociably over the fortunes of the day.

Besides the usual pantry and lavatory, there should be a cupboard, specially arranged with a standing-rack for guns, and strong drawers underneath lined with copper, each with its label, for powder, shot, and all gunning accessories, with the most reliable of locks and keys. Above all, carry an anchor and chain that would hold a vessel twice her size.

Punts cannot well be slung from davits in a small yacht; they are too long and slight, and liable to strain; but a serviceable gig should be carried, one that will answer as a following boat, ready to aid in case of danger, or to go ashore in rough weather. A punt on deck should be raised at least an inch from the surface, to prevent wet soaking, and to allow her to dry when not in use. This can be done by means of three cross timbers underneath, one fore and one aft, and one in her centre. They should be turned up slightly at each end to prevent the punt slipping, and fit her exactly to keep her shape, and so obviate a strain. They may be fitted at their ends with ring bolts for lashing to similar ones on deck when sailing. These cross pieces can be used to lower a punt over the sides in a small craft.

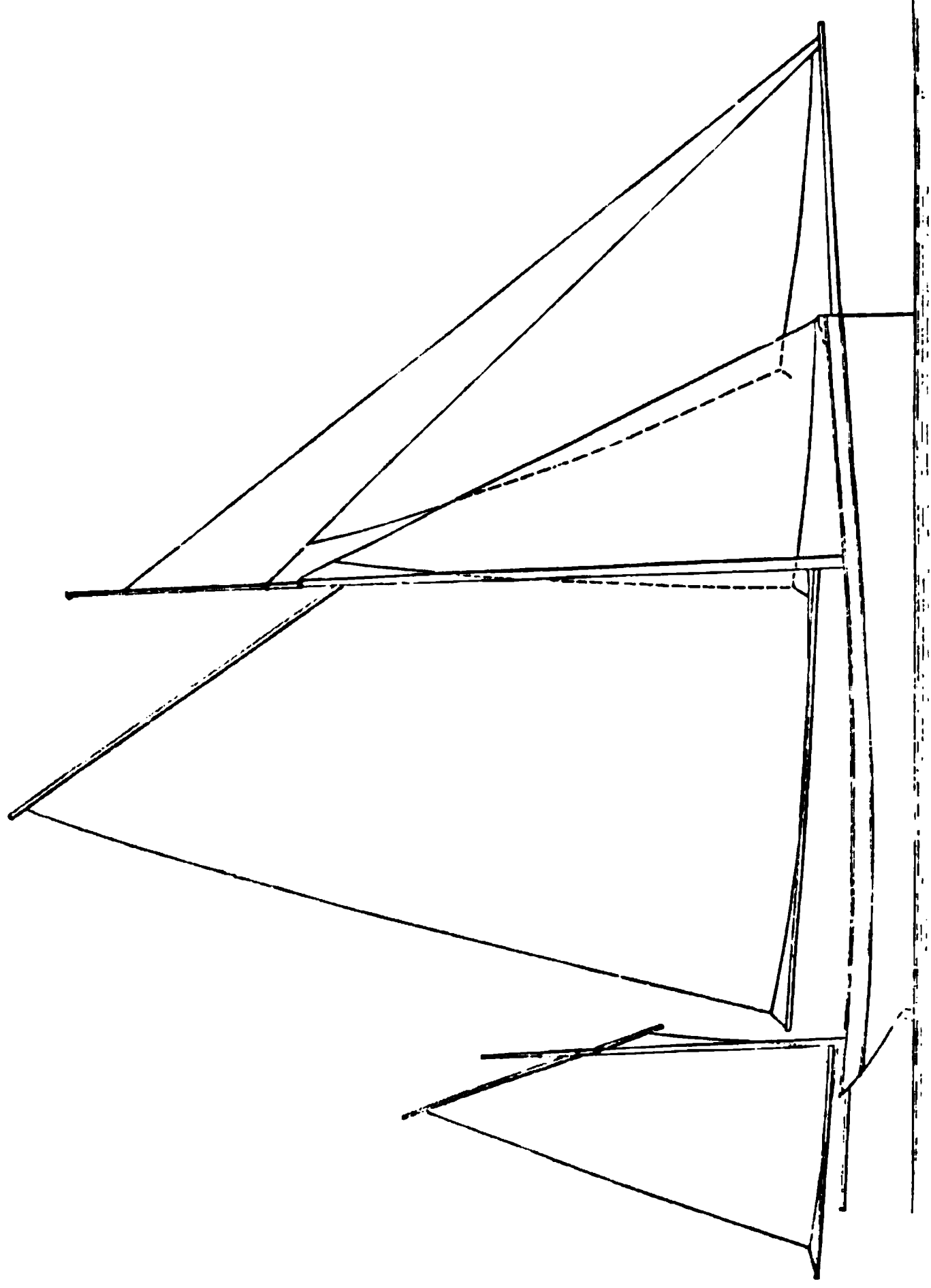


PLATE II.]

SAIL PLAN OF YAWL. $\frac{1}{18}$ inch to the foot.

[P. 336.

Designed by Forrest and Son, London.

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"No smoking on board a shooting yacht or duck-punt," is a warning I have often heard, and seen written. Was there ever such nonsense? You might as well condemn the cooking stove. Powder in a punt, if properly kept in its ammunition-box, should be free from all possibility of explosion, even though a fire were lit in her centre. As well might it be said, "Do not go near a loaded gun with a cigar in your mouth for fear of exploding it." The only possible chance of danger from smoking would be caused by a madman alone, who might unlock an ammunition box or drawer and allow the ashes to drop from his cigar into the powder canister. But madmen do not usually go fowling, I am glad to say, nor do fowlers carry loose powder in their pockets, or dry it in saucepans over the fire.

To keep duck-punts in summer place them in as cool a place as possible, avoiding draughts, which are as bad as a hot sun for warping timbers. The simplest plan is to block them up a few inches off the ground in such a way that the natural spring is retained fore and aft in the bottom. An old sail or tarpaulin thrown over is a good preserver from the destructive elements, heat and cold. If a punt is kept on a waggon built to fit her, she can be moved anywhere from sun or rain by one man, and will be free from all chance of straining. A wooden cover is a necessity, and it should be cut in two at the centre, and slightly curved, to prevent water resting. If in one piece, it is very cumbersome. Do not lock a punt cover, or some rascal will sooner or later smash it open to see if there are guns or

other things worth taking inside. If it is required to be kept down at any time, it can be lashed.

I will now say a few words about punts, and other matters connected with duck-shooting, whether from ship or shore. The dimensions I shall afterwards give will be found to answer well ; but should the fowler be a "heavy-weight," or carry a *very* large gun, he may fancy a larger punt ; if the contrary, a smaller one. The same rules for construction will apply to both, with but slight modifications. I will presently take two classes of punts in hand, and build them straightway, one for double-handed work, open water, and heavy guns, the other for single-handed shooting in smooth water, creeks, rivers, sheltered harbours, and small inland lakes. I prefer at all times "a double," large or small as the locality requires ; it is safer and more sociable. It is always pleasant to have a fellow-being near you, sympathetic in your failures, and happy in your success. It also carries a gun capable of doing far more execution, whether you meet large or small companies of fowl.

To be caught out on a great lonely estuary in a thick fog, in a single punt, alone, is one of the most solitary and unpleasant positions I know of. A long pull home, with a fading light and a threatening sea and sky, by yourself, is equally dreary and disagreeable. Two opinions are better than one at all times, and six opinions would not be too many on such occasions. In a small, safe, land-locked harbour you know well, and whichever way you point must strike the shore, instead

of a possible cruise seaward, is, of course, a different matter.

A moderate-sized double punt, say what you may about its extra breadth and length, will always, if well managed, approach as near, and often nearer, to fowl than a narrow single one; the reason of this being the lowness in the water its well-flared sides and breadth permit. A narrow side-paddling punt can never be as good a sea-boat as one that is sculled. The former cannot have the sides flared out more than a couple of inches at either side, as the floor must be as wide as we can get it; and were it *then* flared out to any extent no man could reach over the bulwarks to work his paddles. Were the sides flared out to make a buoyant craft of her, and yet left so narrow on the top that a side-paddler could work his paddles, the floor would be too narrow by far for safety, and the stability would be but little. The more, in reason, the sides of a punt are flared out the better will she keep water from coming aboard, and the lower she will show, and of course be, in the water, and the better for getting up to fowl. To the wary fowl, when pointed straight *towards* them, it presents a lower and more confused appearance with the land or water than a small high-sided punt could possibly exhibit. A single punt must of necessity be built high in proportion to her size, or she would swamp in a slight sea. Contrast a small high bowl with a low shallow one on the water.

It may naturally be remarked that the high bowl would be safest. So it would if both were

open, but when they are decked all round, save a small space in the centre, as in a duck-punt, the case is altered. I may here note that "clinker-built" punts, though admirable sea-boats, have two fatal objections. They are pretty bits of carpentry to look at, but for *real work* no good. They cannot be quickly turned to right or left when aground to get a shot, as can the ordinary smooth-bottomed punt used for shooting. The edge of each plank catches and obstructs. They have no strength to stand the recoil of even a moderately heavy gun, which recoil requires to be taken by the middle plank of the bottom, and the two sides rigidly built into the stem and stern. This combination cannot be arranged in a clinker-built punt. In fact they are not punts at all, but light punt-shaped wherries. All the attempts I have seen at building such punts, for a fair-sized gun, have proved failures. For a small weapon, carrying perhaps half a pound, they may answer well ; but then the shooter has to lovingly hug a long ugly stock under his arm to partly check the recoil,—a clumsy method of shooting at all times, though not an uncommon one. Besides this, clinker-built punts undoubtedly alarm fowl in smooth water, and still weather, by the rippling noise they make when urged forward. It is not so much the slight unusual sounds that fowl are scared by, but rather that they cause the birds to be on the *alert*, and so look up and observe the more startling fact of the fowlers themselves stealing near.

I have seen the cause and effect of what I write exemplified in actual practice many different times.

For the matter of that, an empty whale-boat, if painted white, would, I feel sure, on certain occasions drift nearer fowl feeding than the lowest of punts badly worked. It is the imperceptible and well-nigh motionless approach of a good fowler that will bring him within shot where others fail who take less care. A very important advantage that a double punt possesses is that of being able to swim in about half the water the smaller one requires, by reason of her greater displacement. Besides this power enabling her to get nearer birds in shallows, she is twice as roomy and comfortable, and the shooter can keep warm by moving about at odd times, which in a small craft he cannot do. In a double-handed punt an immense advantage is afforded by the free use of both hands when taking the shot, and all your attention can be devoted to the gun when nearing birds ; so that, whether they spring, or sit, they should *never* escape when once within range. In a small punt, alone and unaided, the shooter is forced to paddle, steer, and shoot at the same moment. I intend to describe later on a light punt that can be used by one or two men as circumstances require.

It is amusing to hear fowlers condemning the double-handed punt. In the waters that suit it, it will beat any single-handed punt hollow. On the other hand, in places that are adapted to the single, a double could not be worked with the same success, except by *most* practised hands. Half the single-handed punters have never used, or even seen, a properly fitted and well-managed

double. They therefore imagine, in their ignorance, that nothing can equal their own small craft. Why? Because they are small. But they forget they are not small in the right direction. As before said, it is not the size of a double that scares the fowl, nothing of the kind; but the way they are worked, the bad sculling, moving about, and the anxious peeping over the gunwale by the young shooter when setting to birds, as well as the not knowing how to take full advantage of wind, tide, and position. Mark the accomplished fowler—the stealthy, careful manner in which he shoves his punt stem on to the birds when going for a shot! In that position his punt shows least—hardly at all sometimes—and he is then surely steering to ultimate success.

I may here remark that devices to work punts with paddle wheels and screws have often been tried unsuccessfully. It must be borne in mind that the best, and indeed usual, places to obtain shots at fowl are in shallows, at the edges of banks, up creeks, and over mud that may be covered by but four or five inches of water. Any artificial propelling power in the form of screw or wheel must of necessity work below the line of the bottom of the punt. Nothing could move her along that did not grip the water at a greater depth than the two or three inches she happens to float in. Of course it is simple to make a wheel that would act fairly well in deep water, but then how about a sudden run into a shallow, where nearly all good shots are made? In deep water, however, nothing could act better than well-feathered scull or paddles, according

to the class of punt in use, whether single or double. Besides this, no apparatus of the kind could act the part of scull or paddle which give both impetus and direction with one movement.

As already observed, what suits one place will not do so well for another. A large punt in small creeks, strong tides, and overshot but safe harbours, where to see a score of fowl together is an unusual sight, is not at its best. Your powerful gun would have no adequate work. It could not so quickly be shoved up to fowl pitched as could a little light craft. On the other hand, in wild open waters, where greater numbers of birds abound, the small punt would be only fit for a lunatic. The fowler could neither follow the birds into the open, nor pick them up unaided, should he by chance knock some forty or fifty down, without losing half. He must perpetually keep his windward eye on the weather, and would run many risks calculated to spoil his pleasure. His bag would be as empty, in comparison to that of the skilful double-handed workers, who, from extra help and consciousness of safety, could outwit him in every way. I have heard amateur fowlers boast that they prefer single punting because they like to do all the work themselves. This is absurd. There is nothing clever in pulling your arms off in a punt. The art of the sport is shown *in taking the shot*, and the knowledge of *how to direct*, rather than the actual *labour* of the *approach*.

The great art required in swivel-gun shooting is, perhaps, its chief charm: the many different belongings that must each be in perfect order, and yet act smoothly as a whole; the knowledge of

tides, winds, weather; the habits of the birds, and many other important points that needs be learnt. Were it not for this, it would resemble American duck-shooting, where the sportsman merely squats in a floating box and kills fowl by the score as they fly to his wooden decoys, or pass near him. In fact, instead of the shooter seeking the birds, they seek him,—a very indifferent method of shooting duck, though a very simple one, little trouble, and devoid of exercise and skill, except the necessary power of aiming fairly well.

Fowling in perfection, though the birds be unpreserved, is no poor man's amusement—the accessories are too expensive. There is no sport, however, that game-shooters are more ignorant of, a common remark being, "What a large gun! you must kill a great number of duck with such a weapon. If I had a gun and punt like yours, I could shoot *hundreds*. I never saw wildfowl so numerous as they are off *my* part of the coast," and so forth; the idea being that the only requirements to obtain such "hundreds" consist of a gun and punt, to float gaily away from shore before admiring friends, shortly to return well laden, to distribute the spoil by the dozen! How *little* do such folks know or understand the care and knowledge requisite to ensure even partial success, and a hundred other matters not even guessed at, ere the end is achieved—the hours, I may say years, of apprenticeship that will have to be passed in the lonely estuaries by day as well as by night, wet and dry, warm and cold, in frost and snow, ere they could rank as skilful shooters! As little can they realize the triumph of

succeeding—a pleasure enhanced by difficulties, by alternate good and bad fortune; for easy won is little valued.

Were punt-shooting a mere matter of setting forth to kill fowl without any difficulty, *then* indeed would it be slaughter. A friend of mine, who is an indefatigable fowler, with great trouble and expense took his punt and gun to Egypt, where he had heard thrilling accounts of the abundance of wildfowl. At his first shot he killed sixty Duck and Teal, but finding the birds very tame, and no means of disposing of them, his interest at once fled, and he departed, after some half-dozen shots, disgusted—to find all his pleasure renewed on reaching home, where, as when he left, the birds required all his energies to outwit and secure them!

Some affirm that shooting with a swivel-gun is slaughter, from their ignorance of its hardships and science, and from its apparent simplicity. These critics will add, that a tramp on shore and shots at single birds are to be preferred. The latter is pretty sport surely, and easy work! It is hard to *miss* a mallard rising from under foot. Such shooting is rarely to be found, but, when obtained, is, with occasional Snipe and Cock, a seasonable change from fowling proper, as fowling is to it. Yet I *never knew one* of these talkers pass a chance at five or six Duck or Teal together, without scheming and wriggling half a mile, if necessary, to get a shot *into their midst*. Their intentions are *identical* with those of the punter, differing only in that they cannot wield a swivel-gun from the shoulder, or get so near to large companies of fowl.

Another well-known objection is, "that the fowler, with his swivel-gun, wounds many birds that afterwards suffer a lingering death." Bunglers alone wound fowl they cannot get, by firing *long* and *random* shots. Some, out of a large number, must always be disabled without being killed outright; but the man who knows his work would recover ninety out of every hundred brought down. If four or five do now and then find their way ashore, an uncommon sharp look-out is there kept. The mere echo of a heavy shot will bring men and dogs seaward from all sides.

Wildfowl *will* congregate, you cannot help that; it is *your* fortune, and *their* misfortune. Who would spare a large "company" to shoot at a small one for the sake of humanity? Pshaw!

CHAPTER XIX.

Wildfowl-shooting — Professional Fowlers — Anchorages — Fowl in Position—Retrieving Cripples—On Firing at Fowl—Judging Distance—Timing a Shot—Comparative Ranges of Guns.

SHOOTING with a swivel-gun can never be so popular or so lucrative a sport to the professional fowler in Ireland as it is in England. In England, though fowl are far less numerous, the fowlers receive more gratuities from those who employ them ; many Londoners being glad to pay liberally for the sake of getting a few Redshanks, Curlews, and other waders, with their assistance. The professional shooters are men who, making a livelihood as fishermen or boatmen during the summer, find little to employ them in winter. Though they seldom expect to earn any profit by the birds they kill, they have other chances that would not be thrown in their way in Ireland. The wild coasts of that country, and the immense lakes and estuaries where fowl collect abundantly, are quite unsafe for the small punts generally used in England. If English professional fowlers came to Irish waters, they would have to depend for their support on the result of their shooting. There would be no visitors to employ them, and, worst of all, very poor markets for selling fowl. At the most available shooting stations, such as Wexford, Limerick, Cork, Belfast,

and the northern marine loughs and bays, fowlers abound, to their own disadvantage. In out-of-the-way spots, such as the bays of Kerry, Clare, Galway, Mayo, Sligo, and Donegal, swivel-guns are less numerous ; but professional shore-shooters by the dozen. To keep these men in pleasant temper, and prevent their spoiling sport by firing up the fowl, they must be liberally dealt with in the way of a good share from the bag. Once offend the shoremen, demand but one wounded Wigeon that may flutter into their dog's mouth, or come to their hands, and your sport is spoilt in *that* locality for years to come.

These poor shooters trudge to the nearest town of a Saturday to sell what birds they may happen to have killed during the week. A stranger visiting their estuary with his fowling-punt is looked upon, more or less, as a thief come to rob them of their living ; especially when they see him with great, and to them unappreciated skill, go forth and obtain in a few hours more than they can kill in a week, with weary watching and waiting, by night and day, in wet and frost. Let the hint be taken. Jealousy on the part of these shore-fowlers is more excusable than is generally allowed, when their position is *fairly* criticized. But be reasonably generous with the spoil, landing and chatting now and then with a poor fowler on the beach, giving him a couple or so of birds according to his bag, whether empty or full, and you will act wisely. Fowl are money, actual food and drink to *him*, and a few now and then will be no great loss to *you*. Your generosity will lose nothing in the telling,

and your good reputation will increase daily. The professional shore-shooters will become your allies to a man ; they will retrieve your landward cripples instead of purloining them, and assist you all they can in the sport. Should you, however, unwisely take a high hand, declare the fowl are equal to all, and each must get what he can, look sharply after the cripples when they drift ashore, and share with none, then your sport will very soon result in loss and vexation. As they are with a shooter if popular, so will every man's hand be against him if otherwise.

Now from this it will be seen that though fowl may abound in certain places, such spots would never suit the professional shooter, who kills his birds to make a *living*, and who, with the best intentions, cannot *afford* to be generous. Add to this the want of a market for the disposal of more than a few fowl, and the absence of monied sportsmen, his gains would be small. In such localities a large safe punt to carry two men is indispensable, and without this it is not safe to follow birds out at sea. On calm days, perhaps three or four miles from land, the fowl will sit in dense companies. The largest of guns is then a necessity ; but one such chance may occur in a week. *Then* the more birds obtained at a shot the better ; with a small gun it is so many fowl thrown away. When these heavy shots are made, a stout, well-manned following boat is imperative to assist in collecting the cripples, or many would be lost. This boat must be a safe and strong craft, able to take gun, gear and men on board, and to tow all to a place of

always be shipped for a sailing vessel at every port. When making a passage in a steamer, if overtaken by heavy weather, you may be in great danger of swamping ; for they are bad sea-boats, unless large and costly ; whereas a stout cutter, though a third less in size, is perfectly safe. If a steamer be especially built to take the ground, as all proper fowling crafts should be, they roll dangerously and are unsteady.

Shooting from an inn or cottage on the coast can sometimes be done fairly well, but from few houses can launching or landing be effected at all times of tide ; and near these few the birds are wild and wary, as in such convenient spots they are well persecuted. But should you elect to try from land, above all use a specially-built light carriage to transport punt and gun from one place to another. Country carts soon strain and ruin a punt, however carefully she may be packed or built. There is no misery or mar-sport like unstopable leaks. Though plenty of water outside, let us have none aboard a duck-punt, as, being flat-bottomed, a small quantity wets the shooter through, and heaven knows he has enough hardship and cold to undergo without this unpleasant addition.

Fowl are never so well placed for a shot from a heavy gun as when on their first or last legs. On their *first* legs they can just feel the mud or ground as it is being uncovered by the ebb. After a long rest they will search and cluster over the shallows in greedy expectancy. At such times, if the punt can float within shot (often as not out of the question), you will do great execution, and though

aground, and hard shoving will be requisite to get afloat, be amply repaid. After the shot, if in a double, leave man and punt to get into deeper water as best they can, picking up the spoil yourself meanwhile. When this is done, and there is time to look round, you may find yourself on a broad waste of ooze, alone, the punt cruising about in the distance. You should manage to retrieve all the cripples, as in shallow water, with an ebb, they find it harder to dive, and escape every moment, and any that reach the channels will meet punt and man on the look-out for them.

If in a single punt, after firing she must first be pushed out and anchored in deeper water, the shooter returning to see that she swims, every now and then, and picking up the result of the shot as best he can. If a very good shot has been made, and he does not wish to run the risk of losing birds, the punt needs be left aground ; he must then either chance a long toilsome shove to the water, or spend some hours, according to the time of tide, in solitary meditation on the loneliness of the scene, or consoled by his thoughts and tobacco.

On their *last* legs, the birds are heavy after feeding, are reluctant to leave, and crowd on the last piece of available bank, till actually lifted off their legs by the encroaching tide.* When floated, they still hover over the spot till the water is too deep for them to reach the mud with their bills. They then open out, and the shot, though no longer first-rate, is yet, perhaps, a fair one.

On seeing fowl in this position, and not yet

* *This is the time of all others to seek or wait for a shot.*

touched by the tide, make sure you can get within shot without running aground. It is better to wait till the last instant, so long as they are yet on their feet, than to run high and dry. Struggling to get afloat again when so near may lose the chance which, by waiting and running quickly up, might have been saved. Bear in mind that most of the duck species can stand in three to four inches of water ere obliged to swim; if you hurry there will be plenty of time to get within range before they lift their feet to paddle, though, for prudence sake, you are lying motionless three hundred yards away.

I will suppose your punt to be a large *heavy* one, or small and narrow, which is much the same in effect, and to require three inches of water to float her, even *then* the shot should be yours. In alluding to fowl feeding by day, it is a common idea that they do not. On tidal waters fowl, whenever they can, will do so; though from dusk to dawn is the usual time. On fresh-water lakes they rest by day, and feed almost entirely by night in the neighbouring fields and marshes.* Such are invariably the best for the table. On the inland lakes, if food there be, it is either too deep or too near the land, where prowlers abound with dogs and guns to frighten the birds away. *Good shots* are, therefore, seldom got in such places, except on rough wild days, when the fowl will collect on the points of

* The Diving Ducks do not leave the fresh-water lakes at night, as do Duck, Wigeon, and Teal, and other surface-feeders, in search of food. Though the Pochard will at times fly off to neighbouring wet marshes, I never knew the Goldeneye or Tufted Duck to do so. The Scaup is very rarely seen inland, and then only near the coast.

islands and promontories. A company of Wigeon near the edge of a bank, some walking upon it to feed at once, others stepping after them by twos and threes, some in the water near, and all with their heads towards the first that landed, is an admirable chance, and a very sure one. This behaviour is not like the usual caution they show before feeding, of looking round hesitatingly. It is certain evidence that they are hungry and tired, more so were they seen to alight ; and if you have patience to wait, they will surely get well together within easy shot. A mistake when attempting fowl is a serious calamity, and may lose you the worth of a day's shooting on land, though of the best. Be *deliberate* in all your movements, without being any way *slow*. Once in shot your action should be quick as thought, or maybe all your trouble counts at nought. Deer-stalking is a similar sport, and bears comparison to fowling in many ways. The care, the absolute silence, the long and oftentimes tedious circuit ere you obtain your first object "within range," to say nothing of even *then* gaining the prize you have toiled for, or—losing it. As in stalking, so in fowling, it goes to the heart, after a long chase, to see the object of pursuit depart scathless, through the neglect of *one* out of many necessary precautions.

When within range of fowl never hesitate, but at once make up your mind how it is best to take them, and then fire. Of course there are exceptions to *every* rule. The birds may be tamely swimming together, or have their heads down, or you may wish to let them lift. But as a rule they do not *once*

in *fifty* times change their position for the *better*.* It is not often fowl sit favourably on the water (unless their food is expected or has just been covered) for a good shot. At a distance may be seen what appears a dense gathering; on a near approach the birds prove to be thinly drawn out and straggling. The reason of this is that when they are viewed low down, as from a duck-punt, those behind look as though in a line with the ones in front and nearest. Viewed from a height, you would see what shows when on a level with the water as a thick black line to be a nearly round patch of fowl. On getting within range, you will think, perhaps, that their order and position have changed to your disadvantage, when in reality they are as first seen, and as they would still show at a distance. Out at sea, off the mouths of large rivers and estuaries, Wigeon and Teal will now and then be seen packed in thousands. But a perfect calm is then necessary; the slightest wave or ripple, worst of all a long and almost imperceptible swell, will be apt to alter the aim and send the charge over or under the mark. Fowl will often sit very close in rough water, and may be seen tumbling and

* So, in game-shooting, a crack shot never dwells upon his aim, but fires the instant his gun comes to his shoulder. Our old-fashioned shooters think they make sure of killing by following the object with the sight for a few seconds ere firing. They rarely miss, but too often slightly wound or feather the fast-departing game, and seldom get their second barrel off in good time. I have seen a good rifle-shot bring down three Grouse in succession with a ball in pretty style; but he always pulled the *instant* he levelled his weapon. This habit of pausing often causes the most certain ground-game shots to fail at driven birds; as well as it does those who habitually shoot over dogs.

rising over the waves like black carpets of seaweed or drift timber ; but success either in approach or aim is then most hazardous.

One of the best day's shooting I ever had was far from shore in a calm like glass ; the Wigeon when fired at pitched again at no great distance, and sat so thick on the water, that until they were within shot one bird could not be distinguished from another ; but merely living black islands of from three to five thousand fowl each. The same evening the heaviest easterly gale and snowstorm for many years set in (sixty vessels went ashore on the East coast of England that night and the next day—January 18, 1881). I remarked during the day I could not see the fowl when lying down in my punt till almost within shot of them ; perhaps they were equally unable to see me, and this might have aided and even caused my success. This state of atmosphere is known as a "mirage" by the country folk, and when it occurs points and islands from afar appear as if poised above water in the sky—a sure indication of bad weather.

A word now as to distance. Make it a rule *never* to fire a very long shot (I don't say if you can help it, for you always *should*), it never pays. The closer you can get the cleaner you will kill. Have no fear of a too close approach ; in ten years a shooter may not be once near enough to damage the birds, much less to blow them to pieces. I except, however, a fog. It will then happen he may get right among them, as they cannot see him, or he them, till they loom large as swans within twenty yards of the stem of the punt. But at such times

they rarely sit well for a shot, and he would be a butcher who fired at them, even were they crowded, but to lose both dead and wounded. For in a fog so dense that the birds lose their wits, the feel of the shore could not be lost to pick up the spoil.

Seventy yards is a fair range at which to fire, but sixty is a better; and if you see when pushing up that the fowl are tame and unobservant, busy feeding, asleep, or, best of all, resting on ice (*see* plate opposite), do not think fifty yards, if by chance so close, too near. Should they still be unmindful—and this is precious seldom at *that* distance—you may startle them by making a noise. Even then, with Duck and Wigeon, especially the former, there is plenty of time to take deliberate aim at the thickest cluster just as they rise. Fowl on the water and away from land are always difficult to judge whether in shot or not by a man lying prone in a punt; but if eyes and feathers can be discerned, and ducks told from mallards, he is not much astray.

If near land, a shooter can judge better how far they may be, by comparing their distance to that of stones and points near the shore, such as the width of bays, or the length in imaginary paces from rock to rock that the birds may be opposite or in line with, as he draws within shot.

Quick and accurate sight when fowling—a knack in itself—is of more need than the actual power of seeing, as seeing goes. Take a man with excellent eye-power, he will point you out a ship just visible on the horizon, and even tell its rig; or an indistinct mountain-top which, do your best, you cannot discern. Now take him into a ploughed field or a

fernbrake with an old courser or gamekeeper, and let them show him a hare or rabbit squatted—or rather try to, for he won't see it till it jumps up. Another instance of this : mark how a fisherman, especially the poacher with his snatch-hook, will point out a trout or salmon lying in a dark pool. Mr. Longsight will see nothing but waving weeds.

If well within shot of a very thick company of fowl, whether on land or water, and the punt is under absolute control and favourably placed, let them lift a yard or two ; the charge then takes them both on the surface and in the air, and brings, if cleverly aimed, many more birds down than if they were taken sitting. But this is touch and go, and requires a practised hand behind the gun. Great numbers of birds on level ground protect one another from the shot, and at the best of times when so taken, however well aimed, at least a third of the charge is wasted ; some never reaches the mark, and more flies harmlessly over. In a small gathering, the shot which *does* reach the birds is probably ample for the purpose, but in a large one you should endeavour to get as many birds as possible into the shot circle. Aimed at before they rise, part of this circle strikes the ground, part travels harmlessly in the air, and the centre strata, to which is added what of the lower half glances after striking the earth or water, reaches the mark. At a flying shot at birds lifting close together, very little of this circle would be wasted. Too much lead could not be put into a close company of fowl, and the fowler should study to this end. I have before said a very long shot should never be fired, I will qualify

this by adding, save under *most* exceptional conditions, and then deliberately and not a bang at random. You may be in a place where constant popping off is the rule at all distances ; leave such a plague-smitten spot, if possible, for a quieter neighbourhood. When tied down to it you will have to take your chance with the rest, by means of large shot, wire cartridges, and long ranges. Such waters are ruined for proper fowling ; they cannot be bettered, or their frequenters taught the sense of fair-play, in their own interests if for nothing else. Long shots are, under every phase of fowling, failures ; the shooter is too far from the birds when he fires to get quickly to the scene of action ; the fowl, being only slightly wounded, by the time he reaches the spot they were on or over, will be off in all directions and cannot be retrieved.

I consider anything over a hundred yards a very long shot, and eighty to ninety yards a long one. A wild shot is inexcusable at any time. A fool can pull or paddle a punt within two or three hundred yards of the wildest birds as often as not. He can also let his gun off, and perchance bring down a couple at an inconceivable distance, if his shot be large. But the cruelty of all to the fair fowler, who is looking on aghast, is the subsequent boast of science and superiority ; for such talk shows a repetition will occur daily, till no duck will allow a punt within a mile of it.

Those who habitually fire long shots soon lose all idea of distance. What is far to *you* would be as nothing to *them*. When I hear, as I do often, and read it too, that four-bore shoulder-guns will kill

well—mark the word *well*—up to a hundred and twenty yards, I wish I could there and then peg tame ducks or ganders to the shore and step the length. I would offer a sovereign for every bird killed, and ask but one shilling for those let off. There is scarcely a limit to the distance at which a punt-gun will kill by a mere chance ; that is nothing gained ; what you want is the longest distance at which it acts *well*. As to shoulder-guns, sixty-five yards is a long shot for the heaviest of them, let alone a hundred, or a hundred and twenty. To drop a few Dunlin out of a swarm of these birds at the latter distance with BB. is no criterion whatever of a gun's power (*see* page 421).

CHAPTER XX.

Recovering Fowl—Positions of Danger—Mooring a Gun—Getting Ashore in Rough Weather—Foot-stretchers—Lifeboat Punt—Towing-rope and Anchor-line—Sailing Punt—Sails and Fittings.

CIRCUMSTANCES of the moment will *best* show how to recover the pensioners after firing at birds on the water. You can't be too quick in making with scull or paddle to the scene of the shot. Don't hesitate to see what your success has been, but if you want to look about, follow the birds as they fly away, and mark any that fall from the ranks, which they are sure to do ; but *this* should be done when pushing up. A few moments' delay will cost many minutes afterwards, as the crippled at once leave the dead and make off in all directions. The strong ones will surely face the wind or tide, and seem to be conscious they are giving in when they cannot battle against the elements. If up in good time after firing, you are among them ere they have got far, and in smooth water can recover the spoil without difficulty. But it is always a tactical feat to cut off the outsiders first, and take the rest, one by one, leaving the dead and most disabled till the last.*

* However unpleasant the operation may be, take a lesson in killing fowl *neatly*. Decoymen do it to perfection ; a couple of snicks of the neck and that is all, but not so easily learned as supposed. A poulterer will give a good idea. To see a fowler thumping and banging his birds against the sharp edge of a punt, or mutilating them

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RECOVERING FOWL.

363

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snake, and the result be a clean miss.

Never attempt to carry more than a few fowl over the ooze on your back, or they will handicap both shooting and walking, and, if the ooze be soft, cause every step to sink deeper till you at last come to a standstill.* Put the birds into a net-bag and drag them along, or carry them in one hand so that they can be dropped at once, to take a sudden shot at a cripple jumping up suddenly. A bag made of strong tanned net, closely meshed, is light and small when not in use; canvas and other materials get hard, take up space, heat the contents, and, lastly, smell

with a paddle, knocking eyes out, and heads to pieces, is a brutal exhibition, and ruinous to their appearance. He might as well slice the head off a salmon or trout to keep it from kicking when grassed. Birds will keep at least two days longer if hung by the head; tie them together by the necks (the legs slip out), and so sling them in couples across a line. Decoymen have, or had, a method of placing the feathers of one wing of a Duck through those of the other, so that the bird could not struggle or fly away, did they wish to keep it alive and unhurt.

* Stooping, carrying, chasing, walking, and firing for half an hour after but a score of birds on even tolerably firm ooze, is about as hard a bit of exercise as a man can undergo. A dog would there be most useful were he not a very abomination in a punt, wet, cold, shivering, anxious, and much in the way at all times. The better trained and keener he is, the more he will whine and fret, when drawing within shot—a habit that cannot be cured. If coming down wind, the fowl will scent him, and their attention will be directed to your approach.

and taint the birds. When you have a number of fowl in your punt, and no following boat at hand to take them, do not pitch them anyhow fore and aft, but lay them in a row on your right and left under the side-decks, wash and clean them as soon as convenient after being shot, before the mud hardens. Fowl picked up off the ooze can, of course, never be made to look well-dressed as those shot and retrieved on water ; but at all times it is pleasant to see a fowler at the day's end produce the result of his shooting clean and sweet, instead of in a blood and mud-stained heap.

Positions of danger and difficulty vary greatly. Yet many hints may be learnt from others, and more from experience. If caught in rough weather away from shore or following boat, keep broadside or nearly so to the sea. Never put a punt on such occasions stem on to the waves, rather drift two or three miles out of your course to a strange shore, or till help is at hand, than run a risk of being swamped. The fore-deck of a punt is so long and pointed, and to a certain extent flat, that the power of throwing off, or rising from, a wave is small, as the bow runs too sharp to have much buoyancy for a quick rise from under water. When in this position, and another sea takes her ere recovering, there is great danger of filling or becoming water-logged, especially if the gun be in its usual place and has not been run inboard.*

* By waves I do not, of course, mean such as would cause a whale-boat to stand on end ; as bad a sea as *that* a fowler should never be overtaken by if he possesses common sight and observation. Should he be, Lord help him ! but even *then* let him keep his wits, and consider well before acting. A punt by itself and without the

Every lap of a wave she then takes in will increase the predicament. Never sail with the wind right aft in rough water, or the punt will show an inclination to dive, and, what is worse, to keep her fore-deck under. If she were at such times sailed stern first, or the weight of the gun brought a little aft of amidships, she would then skim gallantly over the breakers. When in real danger the most valuable gun is as nothing to risking your life; make fast the anchor-line to the stock and shove it slowly and carefully overboard, being well sure that there is no chance of its hitching to you or anything else as it goes down. It will, with this addition, be no hard matter to recover it by dragging with a grapnel the next fine day. Its whereabouts may be fixed by points taken at the time on shore, which must be well borne in mind, and, what is more, sketched down when land is reached,—as I hope it may be.

You cannot well carry a coil of rope to attach to the gun, strong enough to raise it when it pays a visit to the bottom, with a cork buoy at one end; this may be a good idea in theory, but practice is another thing. You could not estimate how long

gun would float for ever, and, by means of the coaming, be very easy to hang on to. She would not capsize like a boat, and leave nothing but a slippery keel to take hold of. A fowling-punt could not be expected, under any condition, to be a first-rate sea-boat (that is, one able to weather a fair-sized wave), and yet get well up to wildfowl. The *lower* a punt is the better will she act for *shooting*; such build, however, is very unsafe in rough water. She cannot be made to answer more than *one* end really well, and *that* should be to get near the birds she follows. If you want a seaworthy craft you must build her high and big all over—too much so for successful shooting by a long way.

a line might be required. If strong enough to lift the gun from the bottom, it would be too cumbersome in a punt, and liable to foul when paid out in anxious moments, and would require too large a float to support it. Take with you (I do), in open waters (don't forget it in fine weather), an old smooth-running salmon wheel, with a strong fine cord made fast to a bung at the loose end. When an *au revoir* has been bid to the gun, and anchor fastened as directed, pitch this after it, and it will unwind as it goes down, leaving the cork on the surface to mark the spot.*

But I have seen a better plan than this, namely, a copper float about the size of a large orange, with a deep groove round its centre, the line always coiled on it (a pike-trimmer would even do), and a lump of lead with a large treble pike-hook as a grapnel at one end. I never but once had occasion to pitch out a gun, a heavy double-barrel, and by means of such a buoy, which I tied to the anchor, previously made fast by its line to the gunstock, it was easily recovered. Never land a punt with gun and gear in her on a lee-shore

* Though a fowler could never calculate on carrying enough rope, yet a long cord would find bottom almost anywhere. A hundred and fifty feet of rope would be out of the question in a punt, but a mere nothing in cord. It is an easy matter to grapple up a punt-gun when made fast to an anchor and its thirty feet or so of rope, and the latter should be carried, if only on a chance of being so used, when fowling about the coast in deep waters. Of course there are some places where it would *never* be necessary to throw out a gun. Without being made fast to something that a grapnel would catch, a heavy gun could not be raised from deep water. I know of three fine swivel-guns now lying embedded in estuaries, where they are likely to remain, through want of a little thought and presence of mind when pitched overboard.

in a breaking wave. With a swell you can sometimes run her up by watching the chance, but rather throw the anchor out and let her pitch and roll, and even *fill* if it can't be helped, till a suitable time to beach her. She won't sink, and one crack against a stone, or strain on shore, will do her far more damage than did she swamp outside.

When towing home you can land on a lee-shore in the following boat ; whether keel or flat-bottomed, it won't hurt *her*. If alone in the fowling-punt, pay out the line after making sure the anchor grips, till you can step out and wade ashore. Anything is preferable to a smash and the delay of repair—a delay perhaps embittered by the presence of subsequent fine weather and abundance of fowl. The large gun should be well secured on the floor of the punt, and all loose gear in the following boat, if you have one, when making for home in a rough sea. In a punt, without outside aid, the gun should be not alone well secured,* but everything movable stowed in the best possible way for a wave-dance to shore. Half-way, it won't be an easy matter to set things right if they break adrift. Many fowlers trice up their gun-muzzle such a height towards the stars that the barrel resembles the jibboom of a collier. It is a bad bit of ballast then in a punt and sways about. A couple of feet is quite enough ; if water *then* enters the barrel, depend on it the position is serious, and a dry gun a small matter.

The less things lumbering about a punt the better : sticks, drawers, lockers, shelves, &c., only

* Two ring-bolts some 7ft. apart in the centre of the floor under the cockpit will answer to lash the gun safe.

block her up, to little good; though they may be convenient and pretty contrivances in fine weather and smooth water. Keep a light plank thwart six inches wide to fit its either end on to props under the sides. The gun would be in the way of seats on the floor, when it is inboard; but you can, if you like, kneel with the gun between the legs, and



FOLDING ROWING SEAT

Of $\frac{3}{4}$ in. elm, fittings all brass. 8 in. wide on surface, 1 ft. long, 6 in. high. In a single punt one leg of seat can be hinged up and propped with a small metal rod sunk at its ends in holes, and so as to form a convenient angle for the fowler to support his chest upon when paddling to birds.

so push a punt along, with your face to the stem, with as much power for an hour or so as if pulling, and with the advantage of being able to dodge an extra large wave. But if you fancy pulling, a folding seat, as shown in sketch, or a plain thwart as before described, must be used when the gun is *inboard*. Resting the muzzle on the main beam

does not distribute its weight well, and it is unsteady when so placed.

Should you, on reaching land, by reason of tides or threatening sea, determine to get the punt ashore somehow or other, rather than moor her out, you must be very careful. As you wade behind (for you should step out),* guide her by pushing or easing from the stern, as you see best, keeping the anchor-line fast in hand meantime. Above all things, be watchful she does not lurch broadside on to the stones. When incidents like these occur by day, there is usually plenty of help from on-lookers; but it is well to have some idea of how to act when alone, or by night.

Though I write of heavy seas and rough water, I mean only in comparison to the size and power of duck-punts. In a sea that would be dangerous to a large boat I do not calculate on a punt and its owner being overtaken, and with common caution they never should be.

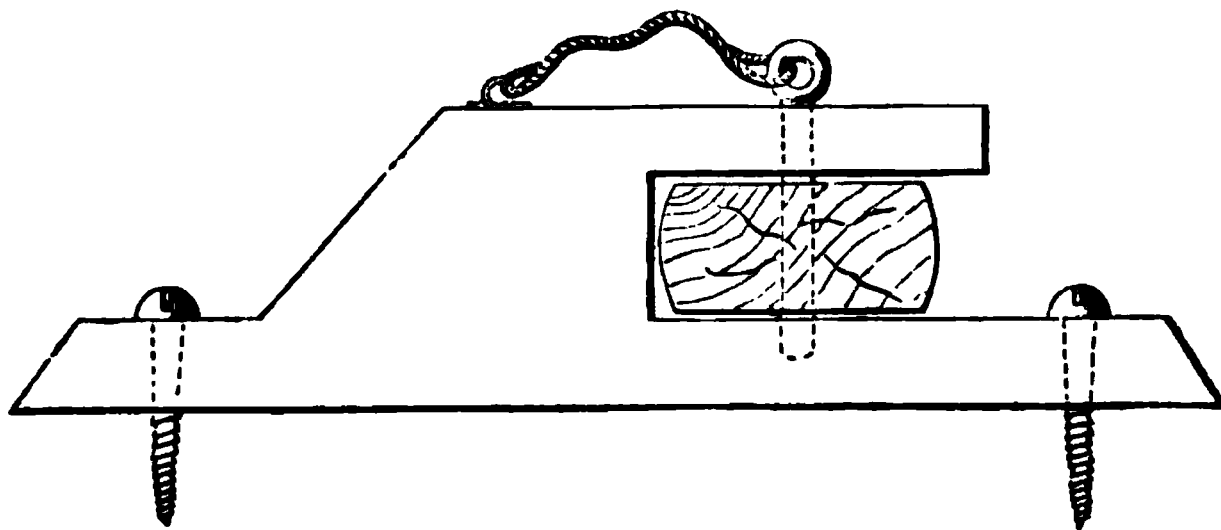
The flooring boards of a duck-punt can be lightly but firmly screwed down to the cross-beams on her bottom, or else secured by a couple of stretchers fore and aft, that fit into chocks at either side. Then, if the punt happens to fill astern of a vessel when towing, or at any other time, they will not float out, and, moreover, add greatly to her buoyancy when water-logged (*see* sketch next page).

A small shutter-like opening that fastens down with catches may be arranged so as to take up aft

* When aboard, if there is difficulty in landing, you have little command over a duck-punt, and your weight in her will hinder a quick shove high and dry up on the beach into safety.

for baling. The stretchers and the fittings for them should be so placed that they would be in the proper position to put the feet against when pulling.

There is no difficulty in making a punt a lifeboat that would float her crew, the gun, and all gear, when filled with water. This is easiest done by closing up the fore and after decks, and so forming water-tight compartments. Cork along the sides, or air-tight bags, will also answer to keep her afloat when water-logged. All these things,



HOW TO FIX ENDS OF FOOT-STRETCHERS,

So as to secure flooring boards from lifting, in case of a punt filling
(of 1½ in. oak).

however, are highly detrimental to killing fowl. You have with such contrivances no room to stow away oars, sail, seats, or small guns, and still less for yourself. The rattling and shifting required when birds were seen, ere you could lie down, would be much against success. If, too, the fore and after ends of a punt are built water-tight, they are very liable to rot and leak inside. It is all very well to say, it is a good thing to feel you are in a lifeboat punt, lest once in your life it may

be required; but it is better not to require it by using caution at all times, or else supposed security may lead into danger from which there is no escape.

The *towing-rope* should be used for towing only, and the *anchor-line* for its own work. The latter can then be light and take up little space. If used for towing it cannot be depended upon for mooring, unless of much heavier material, and more cumbersome in consequence. A towing-rope need never be carried in the punt, but made fast to the following boat or yacht, ready to throw out to you when wanted. The anchor-line should be a fixture to a cleat on the after-deck, at least as much a fixture as a running-loop spliced to its end will make it, for it may be used to be fastened to the gun some day, and your knife in a moment of peril might be at home. If fastened to the towing-shackle, it is then sure to be wrongly applied.

A punt built especially for *sailing* can be used for *shooting* under few conditions of wind and wave. The ordinary duck-punt will sail well in smooth water with a good breeze—two things not often found together—and then only when the latter is favourable, or nearly so. She will, however, sail really well with a centre-board fore and aft under the decks; but for fowling proper, sailing, except when making a passage, is not required, and centre-boards but in the way.* In shallow

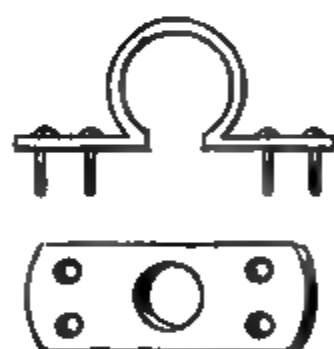
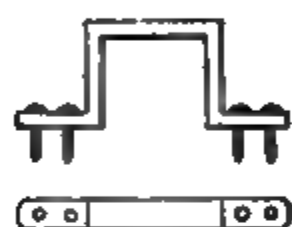
* A centre-board, whether in a boat or duck-punt used in shooting, must be so made that it cannot come up higher than the floor of the punt. In fact, board and floor of punt must be level when the board itself is up. This is best done by making the board fit its

water with soft ooze, the boards, if self-acting, will sink just enough to hinder the punt from taking a sudden turn when perhaps most required for a shot. The smoother and freer from obstruction the bottom of a duck-punt can be kept, the better she will act for shooting. In a fresh breeze without a wave, you can now and then sail down upon fowl, especially geese, with astonishing success; but a strong wind usually means, for a punt, lumpy water, which kills the shot, and if the birds are allowed to rise, the aim is jerky and uncertain. If but a light air, the approach is too slow, and the fowl have too much time to take notice of the sail, while you do not bear down upon them with that deceptive speed that is conducive to a shot. At such and most times the usual method of approach would answer far the best.* You might, except for the variety of it, ten times out of twelve, paddle or scull on fowl easier than when everything is favourably disposed for sailing. A sail, as a third hand in a punt, is at times most useful, I admit, helping you, when the wind is fair, over many a long mile homeward, or on your way. It should be of such a size that a very strong breeze would not place you in jeopardy of a capsize. Sailing in a punt in rough water, for reasons before shown, is most unsafe. She is apt to plough under at any moment, and be

case exactly when up, and the case for it must be covered at the top to prevent its being forced up out of a line with the punt's floor.

* In some places, on very favourable days, you can sail right up to the fowl. You at once think, what a clever plan it is; but on such occasions you would, did you try it, almost pull up to them, and scull or paddle best of all.

swamped. The nose of a punt is sure to dive into, or through a wave, in preference to going over it. In smooth water, the stiffer the wind blows the better; but this could only occur in rivers or channels, and then, unless it is known for certain no fowl are about, there is great risk of



FITTINGS FOR SQUARE AND ROUND-FOOTED MASTS.

Material, gun-metal. For view of mast in position see sketch of elevating wheel (page 424).

coming too quickly on birds to take them in time to fire.

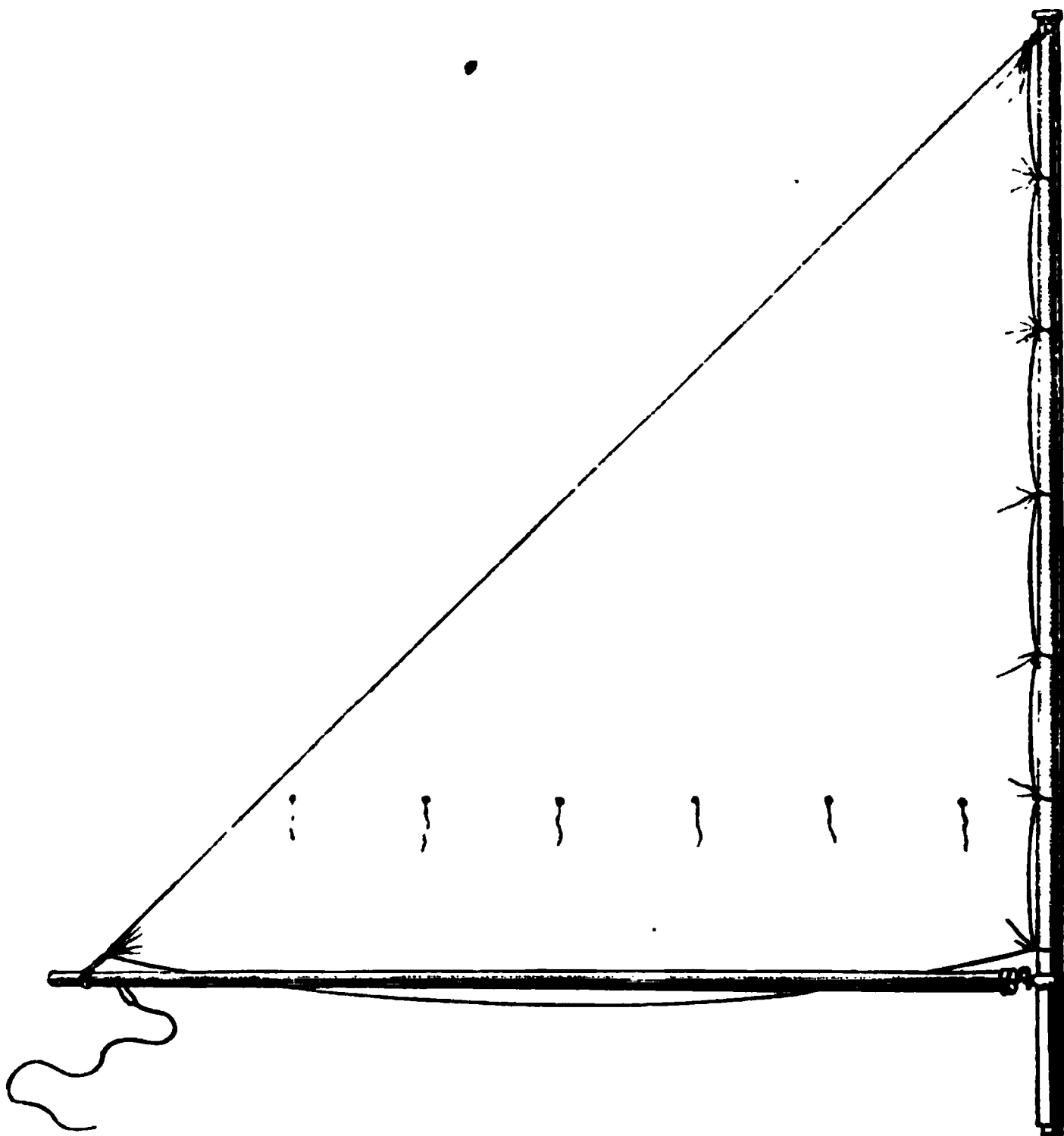
A sail, for many reasons, should be so made that it can be lowered in a few seconds. No hal-yards, blocks, or cleats of any kind need be used; they are only in the way.

Sailing in a duck-punt should be quite a secondary consideration, unless she is built for the purpose, and then, depend upon it, she does not answer well except in deep water for manœuvring the fowl. A sail should be so simple that a fowler can take it and the mast in his hands and raise or lower it at once.

For the best kind of sails, swivel-shackle for boom, and methods of stepping-mast (*see* sketches). To reduce canvas in the "leg o' mutton," all you need do is to take the boom, and hinge it up alongside the mast, and turn the loose sail round the two spars—the work of a few seconds.

The mast and sail can be lifted out, or set again this way very quickly as wanted, or sail shortened instantly in a squall, without trouble or danger.

If, instead of a square-footed mast, it is round, mast and sail will then swing across together when on the other tack, and you do not need the swivel-collar, but can fasten the boom by a "goose-neck" of cord.



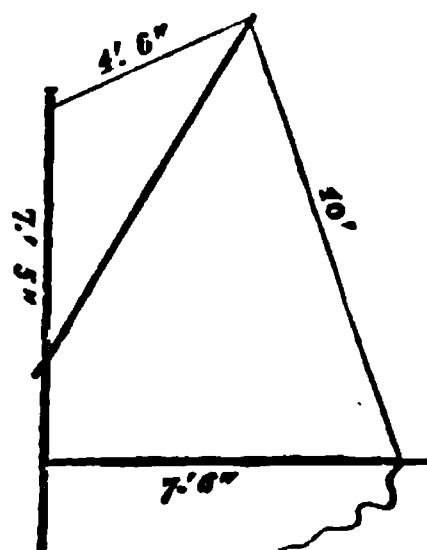
A SAFE SAIL FOR GENERAL USE ABOARD FOWLING-PUNTS.

For a double punt the mast may be 9 to 10 ft. high, the boom hinged on 1ft. 6in. from foot of mast. The sail edge along boom to be 1ft. shorter than it is along mast. That is to say, boom will be 2ft. 6in. less in length than mast. In a single punt mast $8\frac{1}{2}$ ft. high, boom as noted.

For sailing about safe waters, or in fine weather, a spritsail bent to the mast with a light boom secured as above, as well as a sprit, is a first-rate sail for a fowling-punt. For a double punt such may be :—

	ft.	in.
Leech	10	0
Hoist or Luff	7	5
Head	4	6
Foot	7	6

Material, strong linen, barked. Mast 9ft. 3in. high.



CHAPTER XXI.

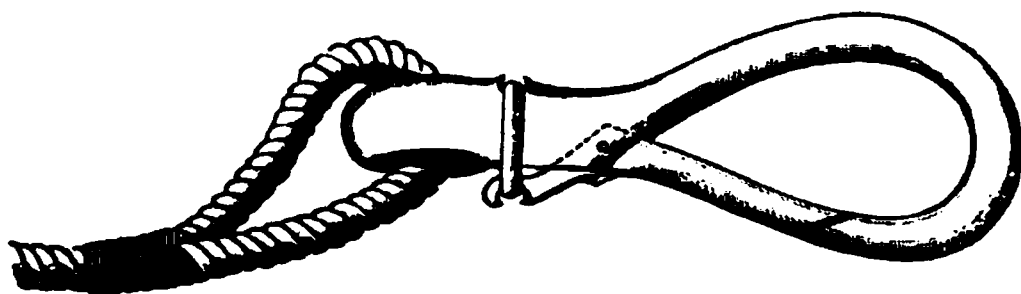
Following Boats—Spring-hook—Mud-boards—Shoulder-guns—Gun-hook — Cartridge-bag — Pocket-ramrod — Punt-guns — Recoil—Trunnions — Breeching — Bootjack-gun — Recoil-spring—Tube and Cap Ignition.

FOLLOWING boats depend entirely on the nature of the locality in which shooting is intended. If in deep open places, where a trip to sea is now and then undertaken in pursuit of fowl, then a strong serviceable keel-boat is required, one that will tow the punt home out of threatening weather. Her draught in such places is not of much consequence. If, on the other hand, fowling is carried on among mud-flats, and in shallow waters, then the flat-bottomed boat, commonly called a *gondola*, answers to perfection. She will follow wherever a duck-punt can float, and therefore be of the greatest service in at once assisting to collect cripples. She can be poled across a bank of mud, to cheat the wind or tide, and will moreover, in a good breeze, actually *sail* over dry level ooze with the punt in tow, and big gun aboard it. She is, if properly managed, a very fair sea-boat, both light and dry, and is able to weather any “jabble” usually to be met on the large lakes and harbours, and, if carefully handled, will ride over short chopping seas that would drench a ship’s gig. They are in constant use by fishermen on the

great unsheltered estuaries in the S.W. of Ireland, in all weather, winter and summer. No boat can skim before the wind so fast, and with a centre-board they will sail respectably at all times, quite enough to assist. They cost about £3 10s., as supplied to fishermen, pilots, and oyster-dredgers, but a superior one might run up to £7, if built with life-boat partitions, centre-board, lockers, etc., and copper-fastened, when she is good for many years. In Wexford, an open shallow harbour, very similar crafts are in use for fishing purposes, but too lightly built for following boats when fowling. The gondola can be dragged over rocks and stones, or up and down the beach, and will stand any rough work it is put to, such as would very shortly place an ordinary boat *hors de combat*. One man can scull, sail, or push a gondola in fair weather anywhere, whilst the punt and its crew of one or two shooters are in search of fowl, and be ready to appear on the scene at once after the shot is fired, to pick up the dead. With two men, or a full crew of three, she is most powerful, and will tow a large punt and gun as if it were a cockle-shell. She should have light bottom boards laid fore and aft to save her floor. (For plans and dimensions of gondola, as well as of light-draught boat, *see* pages 474 to 477.)

When running a punt up or down a beach, the fellows who may assist will lay hold of the most fragile parts by which to pull or push her, perhaps doing considerable damage. The breeching ropes are liable to cut if used as helpers, and you want above all to keep *them* sound for their proper work. There is very little to take a punt by when shifting

her, that is not light and weak to the touch. One or two men, if they could use their strength fairly, would do the work of what sometimes takes three or four. A couple of stretchers to carry her on, and always aboard, are invaluable. To cast off or make fast a punt to following boat is often a matter of minutes: cold fingers and tight-drawn knots cannot be overcome as easily as wished. It should be the work of a moment, as it is often required to be done in a hurry, when delay is dangerous, or fatal to sport. I give a sketch of a *Spring-hook*



SPRING-HOOK.

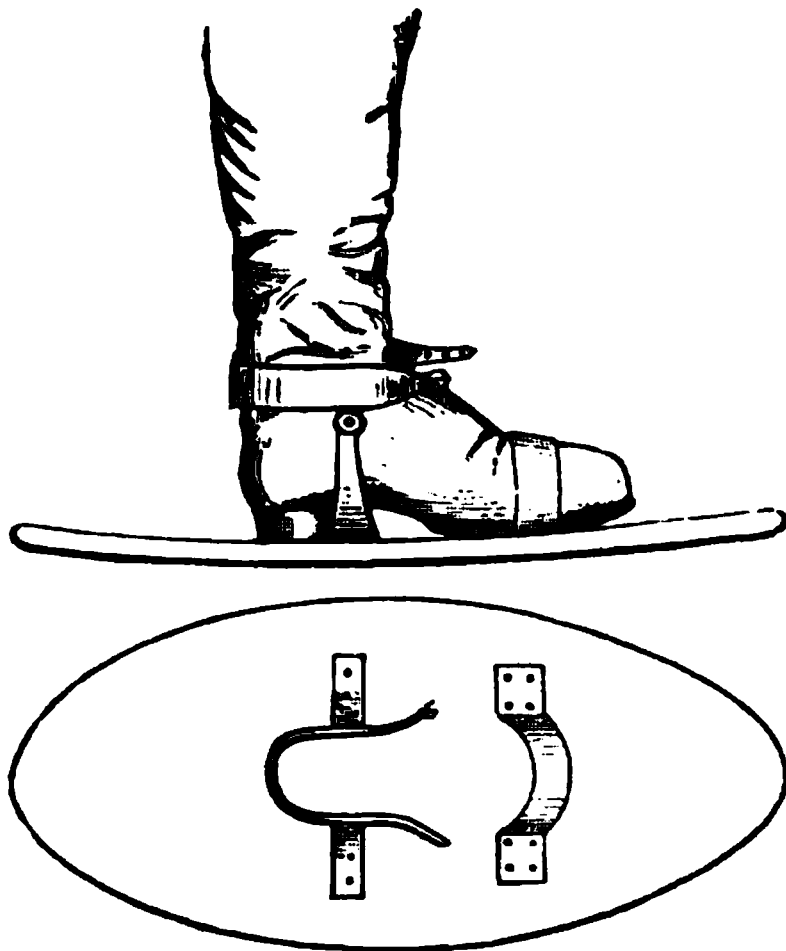
Length about 5in. Material, wrought copper, $\frac{1}{4}$ in. to $\frac{1}{2}$ in. thick.

which I have found most convenient for the purpose. The elastic ring is not affected by water as is a steel spring (which latter gives very soon), and will stand near the whole winter without renewal, and when requisite that is a small matter. With this a punt can be shackled or let go in an instant, and held with safety at all times.

Mud-boards are in some parts a necessity where-with to obtain the cripples on soft ooze. I saw some patent ones the other day in a London shop as complicated as a modern skate, made of transverse bars of wood screwed together with open space between, gridiron fashion—a regular ooze-sucking invention.

Mud-boards should be smooth and even as the outside of a fowling-punt (*see sketch*).

Shoulder-guns.—On this subject a great deal might be written as to various plans, actions, and figure of merit. I maintain that one *good* gun



MUD-BOARDS

Of $\frac{3}{4}$ in. elm, 18 in. long by 8 in. wide. Three small strips of oak, $\frac{1}{2}$ in. square, to be riveted across surface to prevent splitting; the centre one under instep. Two similar strips to be fastened on lengthways outside, 4 in. apart, to prevent a slip sideways on the ooze. Fastenings of stout well-oiled leather, and secured by copper rivets with broad washers over leather.

is much the same as another, whether made in London,* Dublin, York, Birmingham, Edinburgh,

* It is all the fashion to grumble at the prices of London gun-makers. The fact is, to such firms name is money. If they can help it, nothing in the slightest degree inferior will they take in at their doors. (I except those *very* cheap and *new* men.) You may consider you pay *them* to choose *you* a reliable and excellent article. This their long experience enables them to do well. Go to Birmingham if you like (there are certainly four or five admirable firms there), and

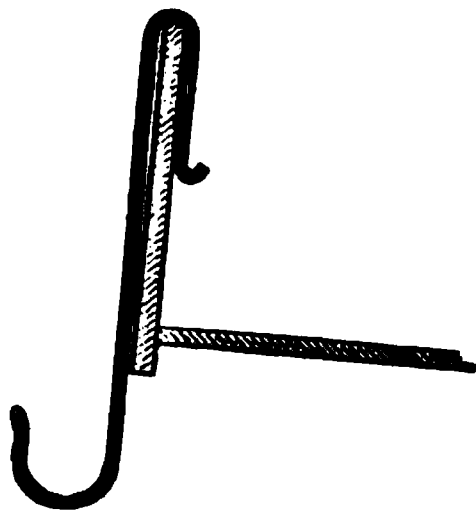
or elsewhere, and by whatever gunsmith. Guns are now brought to such a pitch of excellence that inferior ones would be hard to find, if a *fair price* be given and a *respectable* dealer consulted.* The least valuable should be taken fowling. Salt water ruins a pretty weapon in no time; they cannot thus be too plain. Every atom of engraving, every chink and corner, will at sea become, even with the utmost care, a trap for rust. A fowler cannot expect to keep his guns so clean or look after them so well in a duck-punt as if land-shooting. The constant wear and tear and hard cleaning requisite when fowling will rub to pieces a daintily-built gun in no time. In these days a gun can be loaded so easily and quickly, that two single-barrels are all that is wanted in a double punt. They are very handy and light, and should be at least three inches shorter in the barrel than is usual. You won't notice any difference on the pensioners thereby, but the convenience of reduced weight and length will soon be seen. They will be as mere pistols to carry over the mud when chasing the wounded, compared to what a double gun would feel; and this is to be thought of when a shooter is laden with

take your own choice by all means. Your judgment *may* pick out a first-class weapon; on the other hand it may *not*.

* Nothing pleases gunmakers like a supposed improvement or an alteration in the manufacture of guns, for such changes bring "grist" to *their* mills. "Novelty! novelty! we can't have too much of it," they cry. Hammerless guns were their *last* windfall. Yet one of the most practical sportsmen I know told me the other day that he could discover very slight, if any, advantage in a hammerless gun; and I quite agree with him. Quoth he, "What is the difference as to trouble between cocking small rebounding hammers that lie below the line of sight, and moving a safety-bolt or indicator?"

birds, to say nothing of thick clothes and long heavy boots.

They should, however, be powerful shooters and fire $1\frac{1}{4}$ ozs. of shot comfortably. Be sure they are never left loaded in a punt, the shock caused by the explosion of the big gun may tumble them over and cause an accident; they are not wanted save after a shot, and may at other times be kept on their hooks with a painted duck-cover nailed to the top of the coaming dropping over them (*see sketch*). The man who keeps his *small*



GUN-HOOK TO PLACE OVER COAMING.

A pair to each shoulder-gun, as well as a waterproof cover nailed along top edge of coaming to drop over guns and keep them dry. Bend of hook to be covered with soft leather.

guns loaded in a punt or chance shots at single birds is a pest to the locality, and will get few chances with his *big* gun; but if it so happens no *possible* prospect of a shot with the heavy weapon is on the cards, and a large or small shoulder-gun is carried loaded for single birds flying by, be sure the muzzle points skyward. The best method of doing this is to cut a small slit the width of the stock through the bottom boards for it to rest in

and against; the muzzle can then lie in a semi-circular cut notch or upright fixed ring placed on either side of the big gun-barrel in the upper and after edge of the main beam.

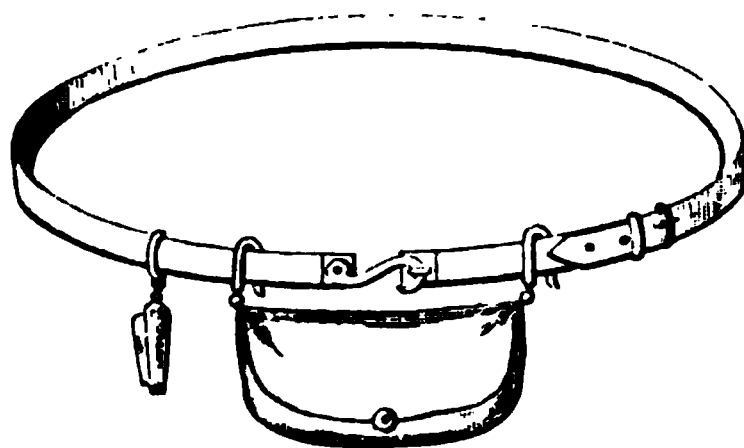
After a shot on the ooze from a double punt one man will have to land, taking a gun and the bag with him, as well as the setting-pole to try soft places, and to pin fluttering birds down by the neck. The other hand can paddle the punt about and pick up or shoot any fowl that fall in, or make for, the water.

The fowler who is alone in a single punt will do best with a double gun, as he is then more liable to lose some of his wounded unless he has a barrel in immediate reserve. If he has not made much of a shot, it is no hard task to retrieve the wounded; but should he be lucky enough to have a score or more down, it is no easy task to paddle, steer, shoot, and pick up the spoil at the same time. A double gun is then a necessity. *Cartridges* should be carried in a well-made waterproof and stiff leather bag with overlapping cover (*see sketch*). The belt of course hooks (not buckles) round the waist, so as to bring the ammunition in front when fastened on. In such a position it can be got at easiest, and one cartridge taken out without letting rain get to the others.* If a bag is used slung on

* That is to say if the bag is rightly made. The opening at the top underneath the cover should be narrow, not much larger than to just get the hand in, and wide at the bottom where the cartridges lie. The flap or cover must fall down to near the bottom of the bag, and be secured by a large easy button. A stiff case such as soldiers use, but larger, answers well, as it will stand on the punt's floor when not hooked on for use.

the shoulders, it swings and thumps about when running, or empties its contents on the mud when stooping to pick up a bird. Such bags are all very well for land work, but they won't keep the cases dry fowling. Chasing lively cripples up to near the knees in ooze, with a soppy swollen cartridge half in and half out of the breech of a gun, is not pleasant.

You need never hook on the cartridge-bag to the belt except when tripping on shore after a



CARTRIDGE BELT AND BAG.

Latter hooks on or off as required. In a fowling-punt the bag may hang on a piece of wire stretched between two screws under side-decks when not required.

shot. When afloat merely raise its lid or flap as it lies on the bottom boards, or hangs under the side-decks, and take one out as wanted. At all times carry a cartridge extractor tied by a leathern thong to the belt or bag itself; it is then near what it is required for. There is no time to search for it, nor can you spare a hand to put it back into the pocket when done with; it must merely be dropped from the fingers when used, and then you can load and fire as fast as you please, and fast firing means *saving birds*. "Tie it to a button-hole," I hear you



FOLDING RAMROD FOR
SHOVING OUT STUCK
CARTRIDGES FROM SHOULDER-
GUNS.

say. Not at all, it is then sure to be on the coat drying at home.

The most carefully-made guns, with the best of cartridges, will stick, not through faults on their part, but from your unavoidably wet, and perhaps sandy, fingers. If out shooting duck these were always dry, as well as your clothes and hands, it might be otherwise.

Never force a cartridge beyond a point it can be pulled out, rather throw it away; when every moment may mean a bird, a useless gun is maddening. But to obviate all these troubles nothing will serve like a three-joint folding (no screwing, please) *Pocket-ramrod*; it could not be carried as a *stick*. The comfort it will bring in an emergency you will indeed be grateful for, for a slight tap at the base of a cartridge *inside* will knock it out at once, though you may pull at it from the outside for a half-hour without success (*see sketch*). Guns do not act as smoothly ducking as when well-oiled in a London shop,

or even as when shore-shooting ; if they did I would spare my ink and paper.

Punt-guns.—A fowler should choose his big gun to suit the shooting he expects to get, afterwards let him buy or build a punt. If in a neighbourhood where fowl are scarce and small shots the rule, then a light weapon will answer (charge half-pound to three-quarters.) There is no object in wasting a large charge on very few fowl. If birds are more numerous without being abundant, though now and again good-sized companies are encountered, then a gun shooting a pound to a pound and a quarter should meet his wants. If, again, he fowls in wild out-of-the-way spots, such as there are many of in the British Isles and other countries, where the birds are plentiful, then a gun firing a charge of from one and a half to two pounds will pay best.

My largest gun (a muzzle-loader), built to my order and drawings, and made, I may say, under my superintendence, was turned out by Messrs. Bently and Playfair, of Birmingham, in 1878. The total weight is 180lbs.; length of barrel, 9ft. 6in.; total length, 10ft. 6in.; bore, 2in.; charge, 8ozs. of powder and $2\frac{1}{2}$ lbs. of shot. (Double-cap ignition or tube if caps run short.)

I am now building an experimental gun I have designed, to do away with the waste of the shot that must always occur when firing at a number of fowl sitting or swimming; this being caused by the charge leaving the gun muzzle in a circle, as pointed out elsewhere. What should kill birds so placed to perfection would be a double-barrelled

punt-gun, both barrels to fire at the same time, or nearly so, as has more than once been tried (notably by Colonel Hawker).*

My new gun is of an oval bore, the major axis of the muzzle parallel to the water, and my idea is that it will send a lateral belt of shot into a company of birds, most of which will take effect.

For general work twenty ounces is a handy charge. This will do good execution among large numbers, can be reduced for small, and yet act fairly well if the gun is not too wide in bore. As a rule it is a bad plan to underload a large gun; a punt is then burthened with extra weight to no advantage, and the capability of the weapon is reduced to that of a small and less powerful one. Better carry a light gun at once than do this. There is a certain charge well suited to every gun, small and large; on reducing this proportion the best are apt to scatter and shoot soft. For this reason a gun will not kill as well at a small company as would one built to carry the charge you have reduced yours to shoot. Should you by change of locality be driven to such expedients, or possess but one gun, it should be of rather small bore in comparison to its full charge,

* I have recently tried to get a large double built in Birmingham, and offered to send a wooden model to work from; but no factory will undertake the job. The gunmakers say special and costly tools would have to be made, and they decline the order with thanks. The fact is, nothing will pay in the gun trade that is not made by the *hundred*. Even small swivel gun-barrels are forged half a dozen at a time, and afterwards converted into breech or muzzle-loaders as required. Messrs. Osborne, of Whittal Street, celebrated makers of big tubes, turned out the last double swivel-guns (a pair) made in Birmingham for Clayton (now Patstone) of Southampton; and this firm still possess the model from which they forged Colonel Hawker's splendid weapon.

say $1\frac{1}{2}$ inches to its outside load of twenty ounces. This last is a useful size for all round shooting, and is not too heavy for a good-sized single, nor too small for a light double punt, should fowl be in plenty. You would not, moreover, grudge sending twenty ounces at half a dozen ducks and mallards, when with a larger gun, unless fowl were very scarce, you would hesitate to do so. When few fowl are to be met with, a small gun should be used, as a fowler may then fire four or five shots a day, picking up two or three couple after every discharge. If in plenty, a large one is required. When numbers of birds are about, and the shooter is sole occupant of bay or creek, he should not fire, as some might, at every cluster he gets near, but watch and wait for the one or two really *good* chances that will occur, if it be favourable weather, sometime during the day. Then the heavier the charge, in reason, the better will his patience be rewarded. One grand combination of fowl, time, tide and wind, and a shot producing sixty to eighty birds is worth all the popping about after small bunches for the season, and a pleasure to look back upon for many a year.

If a heavy barrel is ordered in London, Dublin, or elsewhere, the design finds its way to one man only, or at most two, who live in or near Birmingham, and who alone possess the large and expensive tools for turning them out. If the order is through a well-known London firm, they will charge a third more than if the weapon were sold at Birmingham. You are, however, safer in the weapon if procured through a first-rate London gunsmith, to whom reputation is everything, and

who would not put his name on the barrel unless perfectly sure it was a good one, and free from flaws* (a hard thing to attain in a big tube), and open to minute inspection as to boring, breeching, and workmanship generally, so that by acting thus a shooter gets more satisfaction from feeling pretty certain the barrel is of a high excellence, and by its certainty of safety it may be worth the longer price paid. Anyhow, these large barrels are always stronger than they need be, for if they give way in proof it is a serious loss to the manufacturer, to which the bursting of an ordinary small pair of barrels would be a trifle. These big tubes, unless of steel, are made of one class of material, *i.e.*, "Skelp Twist;" which, though not of a high merit as metal, is quite good and tough enough for the purpose, and to spare. When ordering a large gun, get an estimate of cost of each part, which will give an idea of what you are paying for. If near a respectable working gunsmith, it will be best to get the barrel with breech and trunnions fitted, and let him stock and finish it to your fancy. From Birmingham the lock may be obtained, and castings for a couple of hammers (one to spare). Your own man will do the rest—it is an easy job—at a lower price than they will even in Birmingham, and you can see the gun

* A tail-pin breech is the best in a muzzle-loader to affix the stock to, as it will never let it shake loose. One of the large screw nuts that pass through the stock and the thick part of the tail-pin should terminate underneath in an eye that will take a $\frac{1}{4}$ th-inch rope as a back check to recoil in case it is wanted for a very light gun or with new recoil ropes. If a screw eye-bolt be tapped into the barrel itself underneath it is even better, should the metal be stout at the breech end, and well able to stand it, without fear of weakening or boring too near the powder chamber.

finished off to your liking. If this part of its construction is left to the Birmingham folk they will probably fit a stock some three or four feet long, and shape it in ludicrous imitation of a shoulder-gun. The barrels they can turn out, and know all about, but the stock, fittings, use, and even the ignition, they are most ignorant of. When an estimate of the cost of a large barrel is given, it means the plain tube and nothing more; breech and trunnions are extras. Punt-gun barrels should taper greatly from the breech to the muzzle: it is absurd to build a barrel with three-eighths of an inch of metal at the muzzle; a quarter-inch, or even three-sixteenths, in a small weapon, is plenty. Heavy at the breech, where substance is wanted, and fairly light at the muzzle, enables the balance for the crutch to come nearer the stock, and gives less lumber inside the punt, where every inch is valuable. A big gun run heavy out to the muzzle adds greatly to its weight, to no advantage.*

But avoid the other extreme. A gun that runs down *too* fine outwards, or has its balance *very* near the breech, will surely pitch the muzzle, and consequently the charge, when fired. Moderately heavy by the muzzle, though the spur-balance be as light as a feather, will always steady a big gun's shooting. If a gun is heavy all through to the muzzle, the

* Many punt-gun barrels are made $\frac{1}{8}$ ths thick at the muzzle, and few of as small as even a $\frac{1}{4}$ -inch substance. But no swivel-gun should be lifted by the muzzle, or balanced across a rail or beam *near* the muzzle, for, stout as they are, they will bend. Many large guns shoot crooked for this reason, though the cause is probably unknown to the gunner.

balance will probably be in a small gun three feet from the breech, and you then have that awkward length, besides the stock, inside the punt. This tends to push the shooter too far aft, which in a double punt would interfere with his assistant's position, and in a single put her down by the stern, and spoil her proper trim. The exact balance of a punt-gun, when loaded, should be one foot forward of the trunnions; this will give the shooting balance at about ten inches, as putting the gun forward two inches should give the necessary preponderance to the muzzle (about five pounds). The length from balance to breech should be some two feet four inches, and always less than one-third the total length of the barrel. To carry a heavy gun down a beach to a punt, use two spliced rings of rope about the size of quoits, put the muzzle through one and the stock through the other; yourself and man can then carry it near the ground, where, if it fall, it would do little or no harm. Two men staggering along over rough ground, with a very big gun on their shoulders, is always precarious. A punt-gun, when not in use, should be put in a painted canvas cover, closed at either end and cut in half, that will lace and overlap in the centre; but for travelling a wooden one is wanted, which may be made to exactly fit the barrel and stock, and the trunnions can come through on either side. But to do this the lid must padlock down, as if hinges were fixed to it the gun could not be lifted out. This gives a small case instead of a gigantic one, as is commonly seen. A plug is requisite for the muzzle of every big gun, to keep

out spray or rust. Plugging the muzzle with oakum is dangerous, very. You might not see or think of it in the excitement of making a shot, when left in by mistake. Have the plug (three inches long) turned to fit the bore fairly tight, and tapering a little towards its head. Above all, leave a rim overlapping at least an inch, then no accident can happen unless your eyes are shut when firing, in which case you may open them to find the barrel some yard or so shorter than before the shot. The simplest way to make a sight for night-shooting is to fix a large round *dark* leather button to a small strap, and then buckle the latter tight round the barrel near the muzzle when required for use. But remember, that on even tolerably *clear* nights the best of eyes may easily be deceived as to what *are* and what *are not* birds. I once set up to, and after some consideration fired at, a large number of Wigeon, with a cloud hanging over the moon, for I was anxious, it being the last day of the season, not to throw the chance away. As I was picking up the result of my shot, another, and, what is more, an *experienced* fowler, pulled up in his punt and said: "I have been following your craft for the last ten minutes, *finger on trigger*, waiting till the moon showed a little plainer ere firing, being quite positive your punt was a bunch of fowl drifting from me, more especially as I could hear the birds *you* fired at calling before *me* also."

If you determine on a breech-loading punt-gun, there are every description of such to be had, varying in price from £20 to £100, and in weight from

70lbs. to 200lbs.* But there are always second-hand ones to be picked up, that may be got at less than half the original cost. *Small* breech-loading punt-guns can be built on various plans to answer well; but a large weapon is wanted when the shooting is good, one to shoot some two pounds of shot. I believe very few breech-loading punt-guns have yet been made to use this charge with safety, without being too cumbersome and *heavy* in a duck-punt, unless the latter be of such great beam and size as to be of little use out fowling.

To say breech-loaders as punt-guns will entirely supersede muzzle-loaders, because the latter were laid aside as shoulder-pieces, is a poor argument. The two weapons are utterly unlike, both in themselves and their use. To see a man fumbling with a muzzle-loader on land, with frost-bitten hands diving for caps in his pockets, keeping everybody waiting, losing birds rising all round, would in these days be excruciating. A land-shooter cannot load his gun too fast, whether to be ready for game rising, or that may rise at any moment. The modern breech-loader prevents the loss of shots from tardy loading, and secures the animals or birds

* Mr. Holland, of 98, New Bond Street, is, to my mind, *far in advance* of all other gunmakers in the manufacture of punt-guns. He is willing to act on the experience of practical gunners, and differs from most gunmakers, who, as a rule, scoff at the very idea of any room for improvement in this line, each to his fancy; and bad enough most of their fancies are in the way of big guns, the majority useless for what they are intended. To any one who can give the price, I would recommend the above maker's guns, should they desire to purchase a breech-loader. They are beautifully made, simple and safe. They are bored out of the solid steel, which, being so strong, enables the barrels to be made lighter than if of iron.

that would escape ere recharging, before this was a mere finger-and-thumb motion in its simplicity, as it is now. In the matter of punt-guns, your game does *not* spring up quick and uncertain at odd moments, nor *need* you be prepared for such chances by facility of loading. If you start loaded and get a shot, though there be no cripples (which there should with few exceptions be, unless you fired at random), you may rest assured it will be some time ere you see or may expect another chance. Punting, if done aright, is careful work, and must be carried out with the utmost caution and looking to possibilities. It is not, as in ordinary game-shooting, a happy-go-lucky hit or miss, and take your chance as best you may.

If a fowler prefers a breech-loader, says a muzzle-loader takes two minutes too long to load, that rubbing the barrel out a couple of times is like sweeping a kitchen-chimney, and gives a few other fine-gentleman and absurd reasons, then by all means let him take to the former; but don't let him leave his old-fashioned gun behind when going on a cruise, to be regretted afterwards when cartridges run short, or accidents happen, when the nearest artificer for a day's journey is the village blacksmith.

A few years since there was not a breech-loading punt-gun in existence that could shoot in the same week with a muzzle-loader, though even at that time they were puffed up as something wonderful, merely because they loaded quickly and at the breech, and were in consequence said to be far superior to aught old-fashioned. Their shooting powers were quite a secondary consideration and not thought of; all that was paid attention to was appear-

ance, and the power of opening and closing the breech action with a snap like a rat-trap, to show how quickly the weapon could be loaded, as if a punt-gun was commonly fired about *every three minutes* throughout the day. A few unwary novices paid dearly for these articles, but found them to be ponderously heavy, for extra metal was piled on to the breech to satisfy safety scruples ; very soft shooters by reason of their boring, and with tiny loads in proportion to their weight and size. Gun-makers are now *at last* beginning to discover that ease in working the breech, browning the barrels, fitting and varnishing a huge useless stock, though good things in *their* eyes, are not of much account to a fowler. Though modern breech-loading punt-guns, if of large bore, are, as a rule, ponderous and clumsy still, and carry a very light charge in proportion to their weight, yet they shoot better than those of a few years ago, as they are bored and chambered with greater care. This is an improvement, but whether for active service, hard rough work and killing power, they will ever equal the old style, is a question yet to be decided.

The former show and act well in a dry gunsmith's shop, when well oiled and polished, but that is a different matter to when they are covered with mud and salt water ; and they can't be kept at sea in perfect or even tolerable cleanliness at times, do what you may. A gunmaker, ten to one, in these days, puts to actual trial many of his shoulder-guns, and tries them personally, both at targets and birds ; but where is he to get his experience from concerning the shooting of a punt-gun ? He can't take

that down to the country and practise at pigeons or brown paper.* In light guns, say up to a charge of a pound, a breech-loader may answer well enough to please. Where fowl are few it is, perhaps, a convenience to some to slam it off at every odd couple of birds or so they see, but that is not duck-shooting as it *should be*. Of course there is no doubt breech-loaders can be loaded the quickest. So they can, and if, as I before said, shots were procured every few minutes, or even every quarter-hour, they would be invaluable. *As it is*, four shots a day, rarely more, is as much as may be expected; and a fowler is precious glad to rest whilst his man, if in a double, and himself, if in a single, take a little time to tidy up, punt birds, &c., at leisure. The chances are another shot will not occur for *at least* an hour or more. The gun can then be loaded at leisure; and, after all, *that* is a matter of but four or five minutes at most. The charge can be changed in a breech-loader to suit the birds likely to be met. So it can, but a fowler usually knows what he has a prospect of falling in with; he either loads according, or draws the charge (a matter of a few moments), or rams the shot down on seeing his style of game. A breech-loader can be unloaded at night on reaching home, if it was not fired since last charging. So it can, but the charge in a punt-gun is as safe, if not safer, than in the powder canister, or ought to be, when the ignition (a simple matter) is removed.

* Nor can he at a target; for a punt-gun cannot be fairly tried, as to balance, weight, shooting, &c., save when rigged in a punt as used in actual fowling.

Now a few words about muzzle-loaders. The cost of the latter is about half that of the first described. They are also very much lighter.*

* I here give *size, weight, bore, and charge* for well-proportioned swivel-guns, to suit the punts used in fowling, and to be of service themselves to the shooter *in every way*. In ordering a large gun the first thing to think of is—

1st. The charge of shot it will be required to shoot.

2nd. To ascertain what amount of powder would be required for this charge; the proportion being three ounces of powder to a pound of shot, and a slight increase for larger bores.

3rd. Having found the requisite amount of powder, the barrel should be long enough to burn it, and no longer. The lengths hereafter given are ample.

4th. Necessary weight of gun to take recoil of the charge. And—

5th. Bore best adapted to it.

PUNT-GUNS.

Proportions.						
Total Weight.		Bore.	Charge of Shot.	Length of Barrel.		
lbs.		ins.	ozs.	ft.	in.	ft. in.
60 to 70		$1\frac{1}{8}$ to $1\frac{1}{4}$	10 to 12			7 0
	80	$1\frac{1}{4}$ to $1\frac{3}{8}$	16	7	6 to 7	9
90 to 100		$1\frac{3}{8}$ to $1\frac{1}{2}$	18 to 20			7 9
120 to 130		$1\frac{1}{2}$ * to $1\frac{5}{8}$	22 to 24			8 3
130 to 140		$1\frac{5}{8}$ to $1\frac{3}{4}$	24 to 26			8 6
	150	$1\frac{3}{4}$	26 to 30			8 9
160 to 170		$1\frac{7}{8}$	30 to 32			9 0
170 to 185		$1\frac{7}{8}$ to 2	32 to 40	9	3 to 9	6

About six to eight pounds may be deducted for weight of stock and lock, and some twelve to fourteen inches added for its length.

* This may appear somewhat small for a 120lb. gun, but what we want is too small rather than too large a bore in a big weapon. Punt-guns of a too large bore are always very heavy in proportion to their loads, and when underloaded shoot "soft."

That they are safer cannot, I think, be denied by anybody. There is no danger of a muzzle-loader breaking down, action jamming (for it has none), or getting out of order (for it can't), in-out-of-the-way places, perhaps a day's drive to the nearest gunsmith. Such an accident, when fowl abound, is irritating, to say the least. Punting powder and shot can be got almost anywhere, breech-loading cartridge cases with the greatest difficulty. These must be obtained from the trader who sold or built the gun, whose supply is probably exhausted, the demand being so small, and they will have to be specially made to suit the weapon in question, as there are no standard shapes or sizes, each gun-maker, at present, having a plan and a pattern of his own. A muzzle-loader can be loaded in say four minutes, and that is quick enough for all fowling. I do not wish to slight what advantages breech-loaders do actually possess. They can be loaded far easier in rough water than can their rivals, if a shot should then present itself, a most rare occurrence. But to most fowlers, at least those who know their work, the few advantages breech-loaders can show do *not* turn the scale in their favour, their great weight and cost being much against them. Cost may not matter to a few, but weight is a consideration to everybody, and a great one. A gun that shoots a pound and weighs a hundred, or even a hundred and twenty, as most breech-loaders do, is the same as if you took a forty pound weight with you to no possible good, merely to put the punt's floor lower in the water for the shallows—a bad thing surely.

This weight in the gun also makes it, in single-handed shooting, very heavy to move and manage.

A well-known and first-class gunmaker sends me, as I write, a sketch of his new breech-loading punt-gun, with an ordinary drop-down action and stock some four feet long. It weighs a hundred pounds, and its full working charge is twelve ounces of shot, with a swivel and recoil spring attached to the barrel about 3ft. 6in. from the breech. The gun uses steel central fire cases. The maker writes, "How can I use a muzzle-loader when such a gun as *this* is to be had?" I fear I "burst" his gun (figuratively), as I replied—

"1st. The only class of punt such a gun is intended for, or indeed could be used in, would be a light narrow over each side-paddling punt. In this sort of craft alone does the shooter (and Heaven only knows why even then) take this long awkward stock under his arm to, as he vainly imagines, ease the recoil, or to dip it for elevating to the shot. In a double punt a long stock is so much useless bulk and weight, and would push the shooter very much too far aft, and is never seen in such for these reasons. In a single oar sculled punt (not a paddled one) the shooter lies on his left side for working to fowl. The huge stock would then be fearfully in his way, as he could not take it under his arm. In a double punt, such as are common where birds are numerous, firing only twelve ounces of shot would be a foolishly small charge. Now, in the very light punt that such a weapon *should* be used in, a hundred pound gun would, from its great weight, be

highly inconvenient, for many reasons known to fowlers, but *not* to gunmakers.

“ 2nd. The drop-down action adopted in this gun (the stock takes the recoil of the charge) is most unsafe, and I hoped, after the couple of bad accidents we have had, such actions had been discarded.

“ 3rd. The steel cases, which the writer tells me can be loaded as wanted out fowling, are, in actual practice, the worst of plans. They have to be most carefully cleaned out after every shot to prevent a miss-fire, and every atom of rust (and who can avoid plenty of such when shooting in salt or even in fresh water?) that may be on them scratches and spoils the chamber of the barrel. Steel cases soon wear smaller from work and cleaning, and then obtain room in the barrel to expand or crack, and so stick. Loading steel cases is for all the world similar to charging a muzzle-loader, and more tedious.

“ 4th. The heavy bands are of great weight, and useless; the sliding pin for the recoil-spring should work in a neat loop forged with and on the underneath part of the barrel, such as was used for twenty years, in a gun nearly four times as powerful, by Colonel Hawker.

“ 5th. A charge of twelve ounces to a gun weighing a hundred pounds is ridiculously small. A muzzle-loader of that weight would shoot half a pound more, and its original cost would be a half less.* From their utter ignorance of the punts they

* The cost of a muzzle-loading punt-gun of best quality and workmanship, charge, 1½ lbs.; total weight, 150 lbs.; length of barrel,

are put in, and how they are used, *these* are the sort of guns most of our gunmakers and novices consider perfection.”*

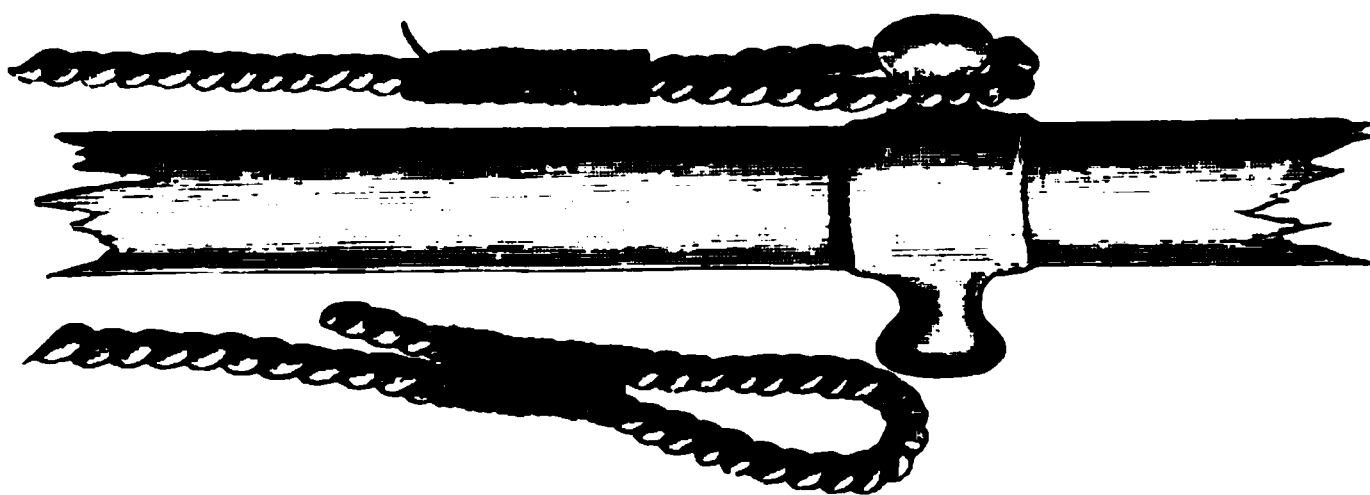
Now I have said what I can on both sides, let each shooter to his fancy, and fowl for us all. Directions for loading breech-loaders I cannot give; they are of so many and fanciful designs that the gunsmith each weapon is bought from should know and show best. As to muzzle-loaders, I will presently, as they are in such common use, deal with them more fully.

Recoil.—Shooters trouble themselves most needlessly in the matter of the recoil of their punt-guns, inventing all manner of strange plans, consisting of springs, india-rubber straps, &c., that in actual practice are often soon discarded. Whatever gun or punt is used, if the latter be properly built at the stem, nothing *can* or *will* be cheaper, safer, or more suitable than ordinary rope breeching fitted to trunnions (*see* sketch). I have fired guns with charges varying from half a pound to three pounds with

8 ft. 9 in.; bore $1\frac{3}{4}$; in weight of barrel, with breech and trunnions, 144 lbs.; circumference of barrel at breech, $13\frac{1}{4}$ to $13\frac{3}{8}$ in.; at muzzle, $7\frac{1}{8}$ to $7\frac{1}{4}$ in.; total length, 10 ft.:—Cost of barrel, £25 to £30; ignition, breech, and trunnions, £10; stock and lock, £5; total, £40 to £45. Cost of charge, 1s. to 1s. 3d. The cost of a breech-loader to shoot the same charge, £75 to £90; weight, 180 to 190 lbs.; same length and bore. Cost of cartridge, loaded, 2s. to 2s. 3d.

* The height of absurdity in breech-loading swivel-guns was only reached lately by a gunmaker who advertised a “*self-cocking punt-gun*”! Still, in my opinion, a hammer *is* very necessary in every swivel-gun, whether breech or muzzle-loader, as it is a plain and unmistakable indicator, by night or day, of safety from explosion or of readiness for a shot. It should have the thumb-piece turned backwards into a ring to put the finger through. This obviates the chance of its slipping from frost-bitten fingers. I will further add, “a rebounding lock is the safest contrivance that *can be put* to a big gun.”

rope alone, and, with ordinary care, never found the *slightest* inconvenience therefrom. As I have tried it under every condition and phase of punting, with every kind of punt and gun, and proved it to act admirably at all times when properly arranged, I will chiefly confine myself to this method of checking recoil. When one plan answers well and meets all your wishes, there is no necessity to go on a tour looking for others; and let this be my argument in its favour, and for my preference in describing it above others. Colonel Hawker's spiral



TRUNNIONS SUITABLE FOR ALL SWIVEL-GUNS.

The arms to project at least 2in. on either side from the barrel.
Breeching on one side is cast off to show eye on rope.

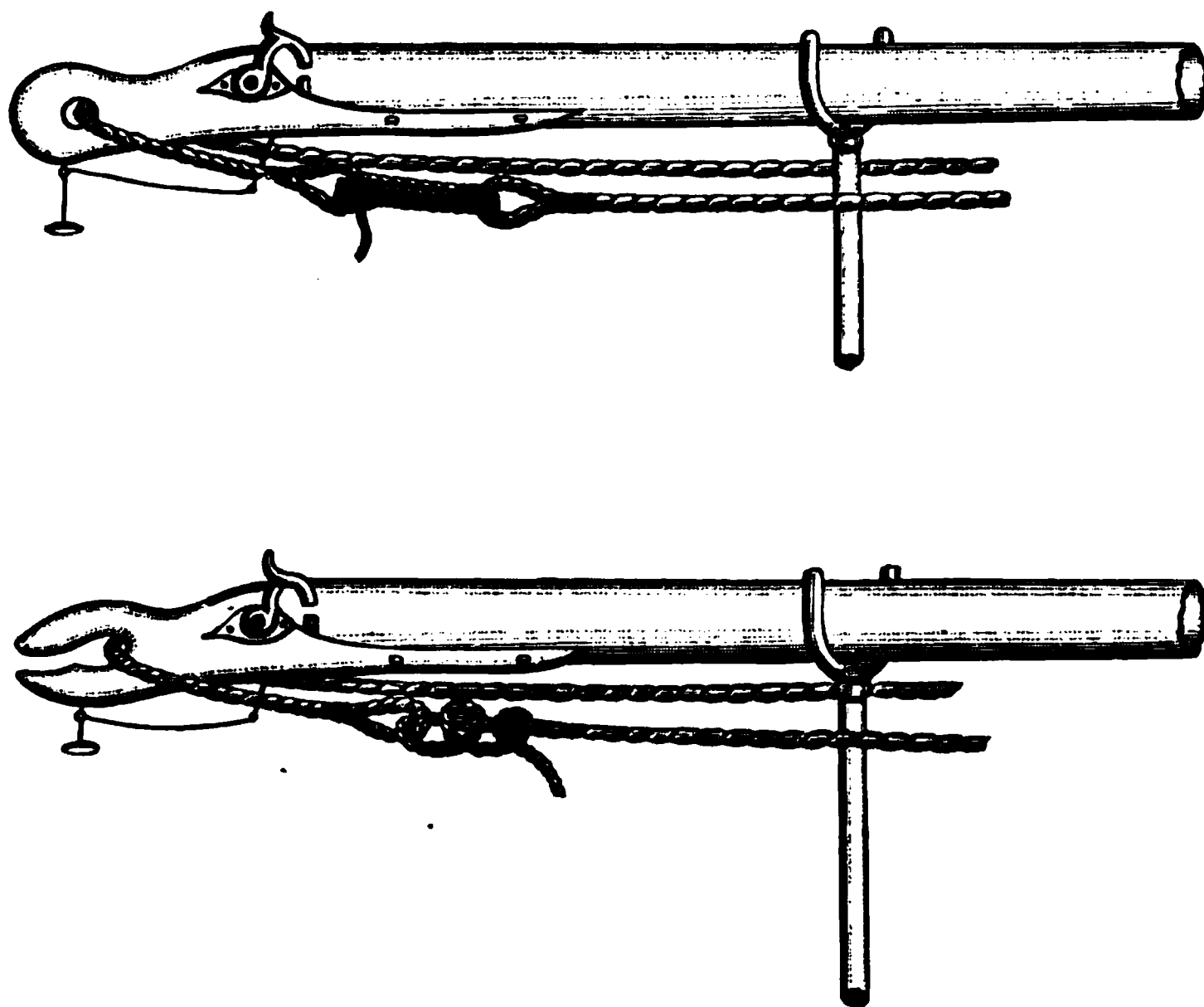
spring was a perfect and clever invention, and it suited well the broad substantial punts he used, with their inch or more thick floors.

Fowl could be outwitted in those days easier than now; they scarce looked on a punt with suspicion then, and a block of wood like a small tree stump to take the pin of the recoil apparatus was not much in the way in a punt four feet or more wide on the floor. But *now* we want much lighter and quicker worked crafts to get up to the more

wary birds, and as they are far narrower than of yore we grudge space taken up inboard. To see a fowler squeezing a long heavy stock under his arm, and to be told *this* is to ease the recoil, raises the question why the ropes should not do the work instead, as of course they ought.* A half-charged gun would come flying back into the stern of the punt, if three men held it instead of one for that matter, did the ropes give way. By all means raise the muzzle to aim by pressing on the stock that is under the arm; if in a single side-paddling punt, do you fancy such a clumsy method? That is altogether another thing. In taking up the recoil of a punt-gun, depend upon it the *best* way is by means of trunnions on either side of the barrel, but in small guns it *may* be done (as shown in sketch) by the stock, though this latter plan gives rather too much play to the breeching. Both plans distribute the recoil fairly fore and aft in a line with the bore, and the charge is delivered in the direction the gun is laid; a much desired, but not always

* As well might an artilleryman shoulder a field-piece. Besides this, a fowler with a stock under his arm cannot dip it for a high-flying shot, or turn the muzzle far to right or left. In fact, he is handicapped in every way for quick easy shooting. Let him try a short stock, and on dropping his paddles he can instantly direct his aim in any direction, high, low, right, left, or centre. Laying the gun as a fixture in a notched rest, and so guiding the punt till the muzzle points fair on the fowl, is a slow and bad method of shooting. Instead of this it is much simpler to use a short stock and direct the gun with the hands instead. When in shot, and the string-tied paddles are let go, how much easier than moving the body from side to side to bring the sight on the birds, or turning the punt's stem exactly towards them! I am, of course, now alluding to a single over each side paddling punt. Of all things avoid a "set gun"; a shell will then set your aim adrift when running into a shallow; a few fowl in the stern equally so. It is the worst of plans.

an attained object. Having to allow for the eccentricities of a gun's shooting by reason of its mounting or loading makes success very uncertain. When the gun is fixed to a breeching rope by a loop *under* the barrel, unless a very heavy weapon, with a recoil spring as well, it is sure to bounce and



SMALL SWIVEL-GUNS WITH BREECHING TO STOCK.

shoot badly. It is as if a point were made with a rapier at a wafer and some one knocked the arm up on the thrust. When the breeching is thus secured under the barrel to a single trunnion, as many guns are, it must be led inside the fore-deck, and is much more liable to rot in that position than if exposed to the air. If the breeching be carried

outside the deck, and be made fast to a bolt under the barrel, as before described, you then have the gun raised upwards, a space the diameter of the rope above the gunbeam, instead of almost touching it, as it should do. The higher a gun is lifted from this beam in a right-built punt, the less steady it will be, and the more will your head show to the fowl when about to aim. A gun laid too high will plunge the shot and prevent its glancing level with the surface. If a gun is laid too low the charge will, on striking the water, bound high up over even the head of a swan. About ten to eleven inches from sight to water answers best.*

Manilla is not favourable for breeching, as it shrinks and expands too much in wet, and in frost

* Even an ordinary shoulder-gun of good size will kill fowl, if it be fixed to shoot low and parallel to the water, with more than twice the effect it would were it put to the shoulder; that is, should the birds, of course, be swimming or resting on land. It is impossible to fire a shoulder-gun lying prone in a boat or punt. It could not be held in such an attitude with safety to the collar-bone; but in the position advised it will often do treblé the execution it would have effected were it fired in the usual manner. You cannot possibly set to birds when lying down and then pop up and fire with good effect. You should scull up and take your shot without rising. As a proof of this, I may say that I have known a single four-bore gun, rigged low in a punt so as to rake the surface well, bag a score of Wigeon and Teal in one shot. I write thus as swivel-guns are not easy to get, but small light punts can always be cheaply built at foreign stations, or on board vessels in distant ports, where wildfowl may happen to abound. Setting forth to shoot duck (as I have many times seen attempted) in ordinary ship's boats on open waters with twelve-bore guns is a *waste of time*. To fix a heavy shoulder-gun in a low flat boat or punt, you can make a hole in the centre of the stock to take a three-quarter inch rope (diameter) and fix it to the stem post, balancing the gun in a spur. For a small gun, a strap round the heel of the gun and lashed across the hand of the stock answers well, its loose ends buckled through a ring in the stem.

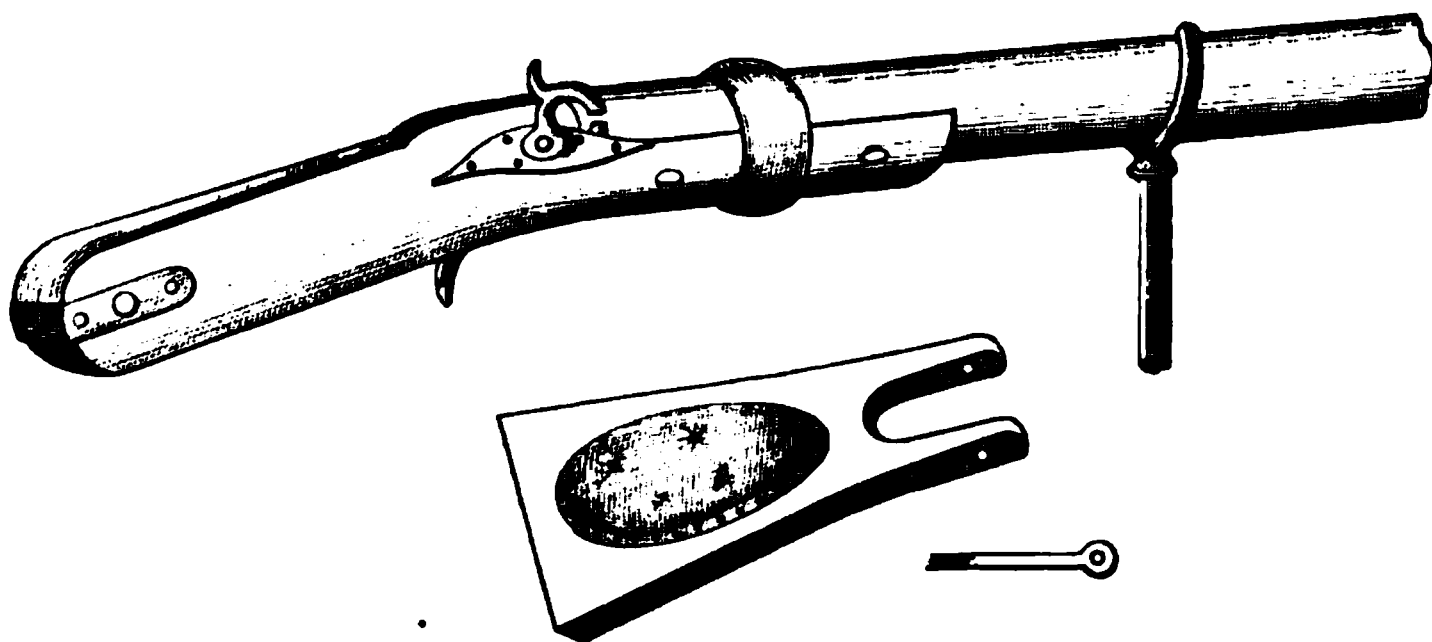
becomes as an iron rod. Tared rope is much the best. The outside coating of tar soon wears off, and it is then smooth and pliant. It is, however, an error to suppose it stands the water longest, it does not, as has been often proved on shipboard. But whatever breeching is used let it have a chance of drying now and then, and do not attempt to cover it with leather or canvas ; it will rot twice as quick when so shut up, will never dry thoroughly, and you will not know the state it is in till some fine day it parts. Tared rope alters its length but slightly under any conditions of weather, and it will not stretch too much, so as to make the gun kick unpleasantly, or too little to make it bounce up from its stiffness. There is a certain size of rope which will suit best every charge.* A *far smaller* rope would hold the gun with perfect safety, but would, from its elasticity, cause a dangerous fly back and run forward, besides giving soft shooting as well. To nullify this a good stout rope is best, and is besides perfectly safe, from its extra thickness—no small matter in itself. Some shooters, when their guns are of moderate size (a very large one would rend all), fix them from any movement, or even recoil. This is done by means of a plain forked stanchion, to which the barrel is pivoted, shipped down into a block of wood riveted to the floor or into an iron frame. This plan causes a gun to shoot very hard without doubt, and is handy in many ways. It, however, strains every-

* For a 2 lb. shooting-gun, rope of 5 in. circumference answers well ; for a 1 lb. gun, rope of $3\frac{1}{4}$ to $4\frac{1}{4}$ in. will do. Always choose for a breeching what is called bolt or sail-edge rope, which are the same. This kind is very flexible and much stronger than ordinary rope, as it is made from fine-spun yarn of high excellence closely laid.

thing about the punt (unless a very heavy one) and gun, and, except in a small weapon, gives a terribly hard jerk to all fastenings, though no appreciable recoil to the shooter, as the gun cannot, of course, come back towards him. But the block of elm or iron cradle for the swivel-pin is both heavy and awkward in a neat light duck-punt. Another plan is by means of a long galvanized iron rod, one end secured to the stem under the deck, the other made fast by bolt or eye to a socket for the gun-crutch. A gun fitted up either of these hard-and-fast ways must be left somewhat heavier by the muzzle than with breeching, as, being without any play, it is always apt when fired to pitch up its fore end.

As before said, a gun throwing much over a pound of shot should *never* be rigidly fixed in a *light* punt; it would be highly dangerous to the shooter and the punt's safety if fired when aground. To work safely a large gun so fixed, it would require a punt like a barge in strength and size, with recoil block or rod ponderously heavy, two things not conducive to success in shooting. For my part, after trying every kind of recoil spring and check, I have returned to the plain rope breeching; it is simple, safe, cheap, never gets out of order, and answers the purpose to perfection, and what more is wanted? It does as well for large or small punts and guns, to any description of which, I will be bound, it will answer if properly applied and fairly tried. About every third year it can be thrown away and another fitted—a matter of a few shillings. The rope would last much longer, perhaps thrice as long, but it is best to feel safe from even the bare chance of accident. Always

unship a breeching after the season, coil it up, and hang it in a dry loft or other safe place. If left in its usual position, it will set into such a hard bight at the hole in the stem of the punt, that the strands will be liable to crack when next they are moved or



SWIVEL-GUN WITH BOOTJACK RECOIL-BOARD.

Elm board 16in. to 18in. long, according to bend of stock and depth of punt; the longer the board the less will recoil be felt; 10in. to 11in. wide at base, 6½in. outside at neck; the former 1½in. thick, the latter 2¼in.; hollow to take gunstock 5in. long, and each arm strengthened outside by copper plate. The face of board to be hollowed out ½in. deep, packed with wool rising ½in. above surface, and covered with leather or canvas. Lower edge of board to be sloped to run smoothly on floor when attached to gunstock. Connecting pin ½in. iron, with a small nut to keep it from slipping back.

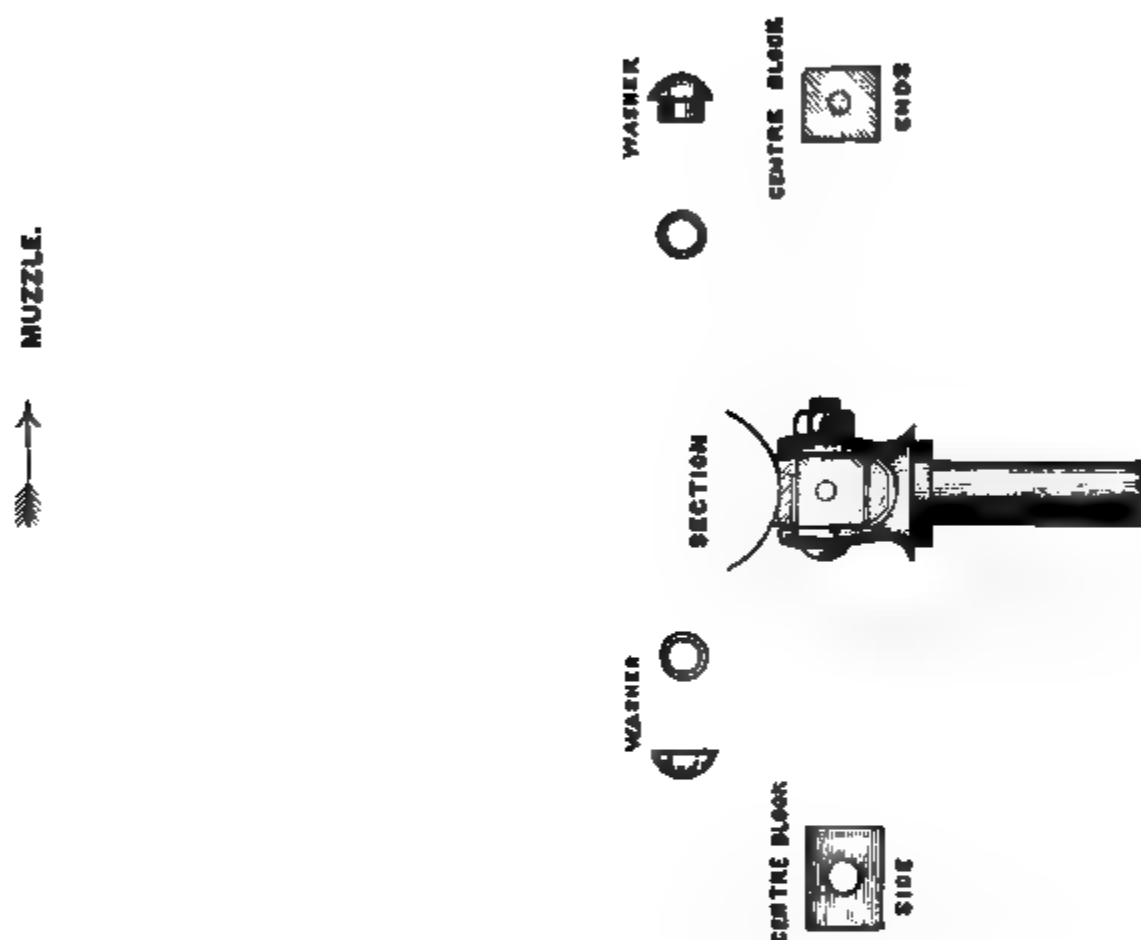
straightened for use, or the gun is fired. (For other methods of taking up recoil, *see* sketches and descriptions of Bootjack Recoil-board and Recoil Spring as above and on next page.)

FOWLING-PUNT AND GUN FITTED WITH BOOTJACK RECOIL.

When setting to fowl the shooter leans his chest on the cushioned board as he paddles over each side of his craft through the openings in the coaming that at other times are closed by their movable shutters. The gun must be well overbalanced outwards, so that it will not tip the muzzle too easily. By pressing against the board as the shooter rests on it, the gun can be instantly elevated for a flying shot. This punt may be built lighter than any other method of recoil requires, as the stem, stern, and floor require little weight or strength. The trigger should be large, and covered with cork or soft leather, as, having no lanyard to it, the fowler needs strike it with his fingers to fire the gun. A gun carrying twelve ounces of shot may be thus used with ease and safety, and without any unpleasant jar to the shooter. The punt may be, for a sixty to seventy pound gun, and ten to twelve stone man :—

Length on deck	ft. in.
Length on floor.	17 0
Width at gunwale	16 5
Width of floor	} extreme	3 0
		2 8

Height of stem, 4½ in. ; of stern, 7½ in. Material, ½ in. to ¾ in. yellow pine. Decks, ½ in. to ¾ in.



RECOIL SPRING FOR SWIVEL-GUN.

No work on fowling could be near complete without an allusion to Colonel Hawker's spring, that beautifully simple invention which in the designer's own huge gun has stood the test of near half a century of use ; and there are many guns at work every season that have had this recoil apparatus attached to them since the Colonel's day, and still act as well as ever. If swivel-gun shooters *want* a hard-and-fast method of fixing a gun, nothing simpler or better has been, or ever will be, devised. For whaling harpoon-gun, sailing-boat, or fowling-punt, if the latter is able to carry the large block necessary to take the swivel-pin, it cannot be excelled. I have seen and tried

indiarubber washers, but in hardness they are as wood compared to a spiral spring, besides other serious drawbacks. The great advantage of Colonel Hawker's spring is that the pressure of the recoil comes fair and straight against the balance-pin which is in line with the spring, and not, as many guns are now rigged, against a swivel *below* the spring or line of recoil; the very worst of plans, as then the muzzle is thrown up on firing, and strength is sacrificed as well. If a spring did snap—a thing I but once knew of—a quarter-inch washer between the severance would set all right, and the act of breaking could do no damage, as the spring is pressed *in* by recoil, not pulled *out*. I give an adaption of this apparatus, with the addition of a back spring, which will be found to check all reaction after firing.

DIMENSIONS FOR A GUN SHOOTING A POUND OF SHOT.

Total length of loop inside opening, $12\frac{1}{2}$ in. Breadth across, $1\frac{1}{2}$ in.

Fore or longest spring that takes recoil when gun is fired, $6\frac{1}{2}$ in. long. This spring to be contracted a $\frac{1}{2}$ in. when first placed in loop.

After or short spring that checks back recoil after firing, $3\frac{1}{2}$ in. long.

Diameter of fore spring outside, $1\frac{3}{8}$ in.; inside, $\frac{7}{8}$ in. Thickness of coils, $\frac{1}{4}$ in.

Diameter of after spring outside, $1\frac{1}{8}$ in.; inside, $1\frac{1}{16}$ in. Thickness of coils, $\frac{1}{8}$ in. This spring requires to be smaller than the other in diameter, as if it did not fit close over its sliding-rod it would swerve when left loose by the contraction of fore spring on firing the gun.

Centre block, that fits accurately and slides inside loop fore and aft, $2\frac{1}{4}$ in. long by $1\frac{1}{2}$ in. broad by $1\frac{1}{2}$ in. high.

Diameter of connecting-pin, that fits and works through hole in centre block, $\frac{3}{4}$ in.

Length of fore sliding-rod when in position, 9 in.; of after one ditto, $7\frac{1}{2}$ in.

Diameter of both, $\frac{3}{4}$ in.

Diameter of shoulder on fore sliding-rod, $1\frac{3}{8}$ in., so as to fit fairly tight inside spring. Its fore end to be rounded off a little.

Length of shoulder, $1\frac{3}{4}$ in.

Diameter of round stem of swivel-pin, that drops into hole in wood-block secured to floor of fowling-punt (or, if a sailing-boat, plate on fore-deck), $1\frac{1}{2}$ in. Its length or height over all, $8\frac{1}{2}$ in. to $9\frac{1}{2}$ in.

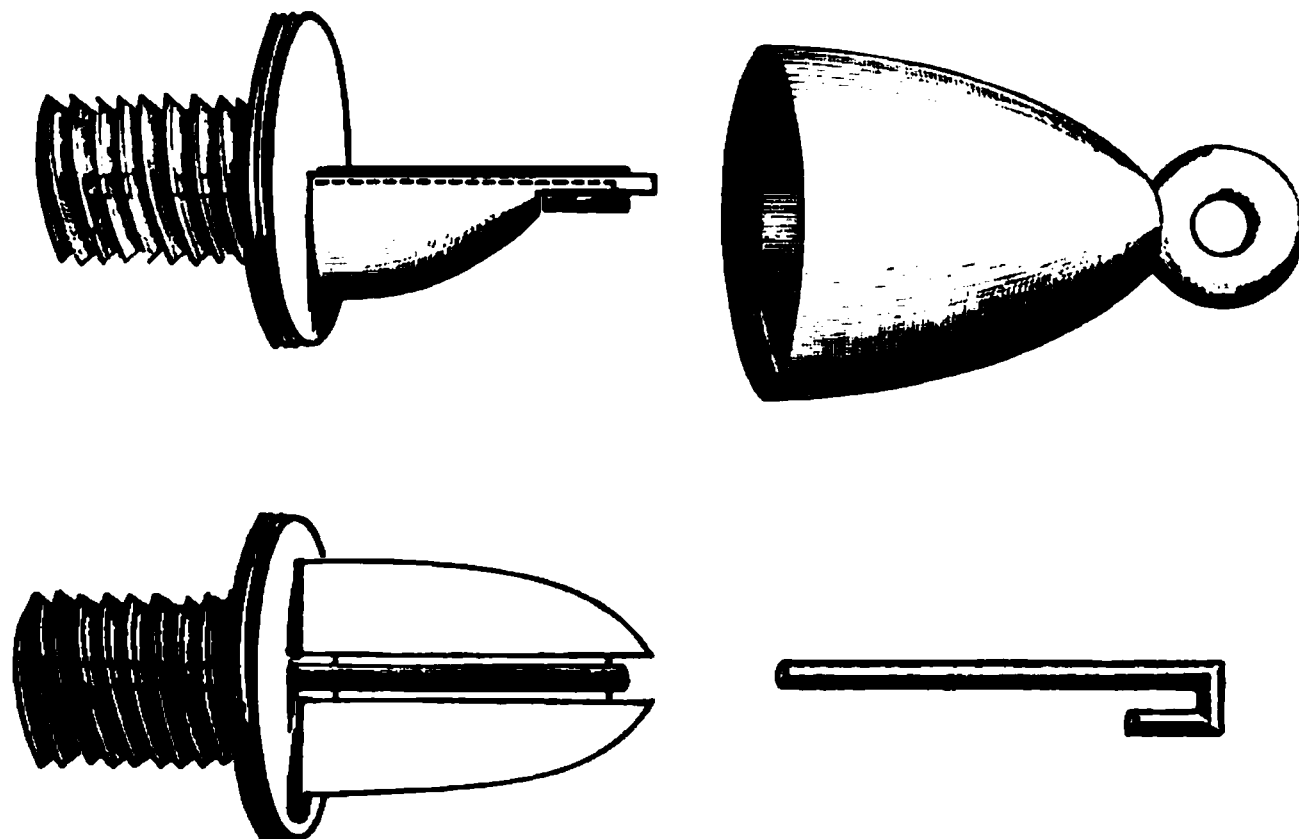
The jaws above shoulder of swivel-pin are exactly apart sufficient to take centre block and loop between them, so that working parts are kept in position, and cannot shift to one side or the other. At base of this opening room must be left for play of loop, to enable the gunstock to be dipped for a flying shot. The jaws $\frac{3}{4}$ in. thick at thinnest. The under part or bar of the loop being rounded, enables the lower part of each jaw to be rounded also, thus giving strength

where most needed. On building a new gun the entire loop may be made part of the barrel, so dispensing with the bands and mortice, and giving a very neat and light appearance to the gun at this part. I may add that gunmakers profess to be unable to procure good springs, or ones that will stand : all that can be said is they *ought*, and if they took pains to do so they *would*.

Ignition is all-important in every description of punt-gun ; it cannot be too certain. A miss or hang-fire when game-shooting with a twelve-bore is of no great moment, unless at a Cock ; even then consolation may be obtained by a subsequent shot. In fowling, a miss-fire may lose the well-earned reward of a day's toil, perhaps fifty birds ; for not once in a hundred times will fowl sit after a snap, and when within shot the motion necessary for a fresh cartridge, or another tube or cap, is sure to rise them. To ignite a big charge properly you must fire a small charge into it ; but whatever the ignition may be, let it be infallible. All the trouble and care you may take to secure this is a mere trifle when an absolute certainty of explosion is thereby rendered, and security from a miss-fire obtained, whether good or bad chances occur.

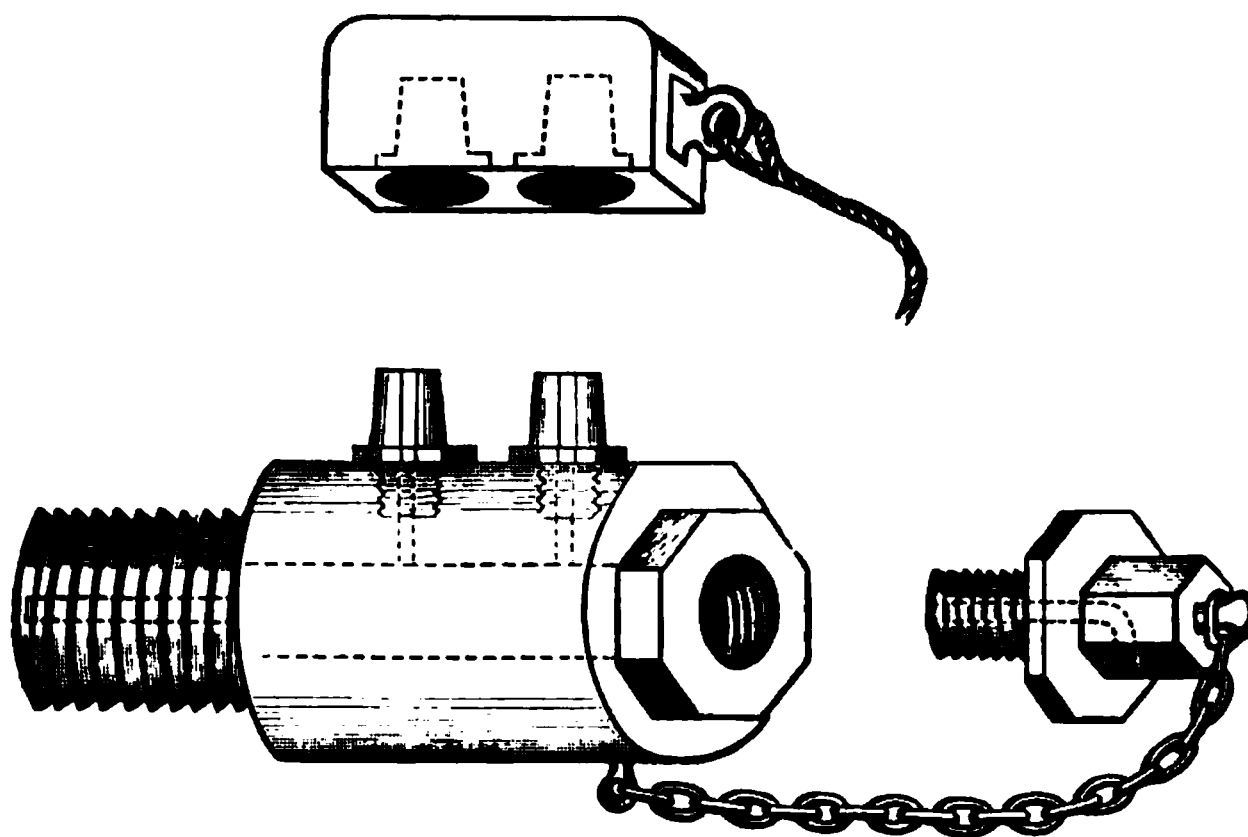
It is no such easy matter, as some would think, to ignite a big gun without chance of failure. I give two plans (*see next page*). I would not, however, recommend the tube ignition for a charge of over one pound and a half, as it causes rather too sudden a recoil with a heavy dose of powder. The double nipples are then the best, though they take a little longer to get ready. This twin-cap plan *never failed me yet*, and I never expect it to, though I have fired near a thousand rounds by its means. The two caps are of course exploded simultaneously by a

broad-nosed hammer, the tube by a sharp-edged one striking it across.



TUBE IGNITION WITH TUBE AND COVER.

Tube is here shown separate and in position on tube anvil as well.



DOUBLE-CAP SIDE PLUG FOR MUZZLE-LOADING SWIVEL-GUNS.

The only *absolutely certain* plan of ignition for small or *very large* M. L. swivel-guns under all circumstances and conditions of weather:—

The brass safety-cover may be attached to end of trigger lanyard, to serve instead of loop or toggle.

Fill the large chamber in the plug with fine powder from a small flask, inserting also a little in nipples, and screw end home. A tiny key-wrench may be kept in case the latter sticks. The overcharge of priming escapes through dotted channel that opens downwards in screw end. When the gun is likely to be kept primed a long time this orifice may be stopped with wax, else it is never necessary to do so. The nipples in such case may be protected with caps flashed previously in the fire; and the gun would go off as well in a year's time as the day it was loaded. The holes in safety-cover should be drilled so deep that the caps are not in contact with the cover when it is over them. The length of main screw depends upon substance of side of barrel at breech. This screw should not go right through to the inside, but leave $\frac{3}{8}$ in. to $\frac{1}{2}$ in. of metal between its end and chamber of gun. Diameter of hole in plug, $\frac{1}{8}$ in.; in screw end, $\frac{1}{8}$ in.; through side of barrel and in main screw, $\frac{1}{16}$ in. Outside diameter of plug, 1 in. Length of plug without ends, $1\frac{1}{2}$ in.; small screw end, $\frac{3}{8}$ in. long. Ends of small channels, and corresponding one through side of gun, to be bushed with platina to prevent their wearing too open.

Always try a box of caps when first opened; if they are bad, they fizz and splutter as would a damp lucifer match. Don't condemn them, but subject them to a great heat and they will probably be as good as ever. Never risk caps or tubes becoming affected by damp; salt water is an insidious foe and invades everything. Take out but a dozen or so at a time from a glass bottleful kept near heat, and what are not used either throw away on reaching home or put in a box by themselves for further proof, lest they should have suffered from damp during the past day. Do not treasure caps and tubes as priceless articles; one miss-fire might lose the worth of twenty boxes of them.* So be sure

* Copper tubes were, and I may say still are, in very bad reputation with many fowlers. The reason of this is that gunsmiths kept them in stock too long, perhaps twenty years, and then sold them as wanted, which might be but in small numbers now and then. The tubes made to my order by Patstone, of High Street, Southampton (who, I may say in passing, is one of the very few gunmakers I know who is *au fait* in *all* connected with wildfowl-gunning), have never

they are good and dry, then they won't disappoint. Place them when out shooting in a small thick flannel bag, or tiny glass bottle that will go into the waistcoat-pocket, half filled with sawdust, or better still, bone dust. With a friend's gun I had two miss-fires on the same day; the first shot was scarce worth the charge, and I was almost glad the gun *did* fail; the next was, without exception, the best chance I ever had in my life, and the shot would have realized *at least* a hundred Teal.

To see large thick-barrelled M. L. punt-guns, with a patent breech and single horizontal pillar nipple, is to witness a marvel of chance in the explosion. Every time the gun is cleaned dirt and scale are apt to be shoved into the small chamber by the action of the ramrod. Besides this, the slight flame from the one cap has to penetrate perhaps two inches ere it reaches the charge, seldom less. To explode a large charge, the flash from the ignition should pierce its centre at the base. In a plain breech this is perfectly done by the continuation of a groove across its inside face and in line with the vent. Along this the flash will run. But either tube or double nipple are equally certain, if the detonation be good, to ignite the charge; in fact, the double-nipple plan would almost start a charge of shot, but then it is slower to load with, whereas the

yet failed to explode my largest guns. In the double-cap plan, a little plug of soft wood lightly tapped into the vent-hole answers as well as the perforated screw, but is more trouble and not so sightly. Were there *no* escape for the flame, it would surely blow out *any* impediment. Before the surplus ignition blows out the plug of wood or escapes through the screw end, it has met enough resistance to drive the flame with great force to the main charge.

tube is the work of a second, and can be put in or taken out instantly, or as occasion requires, for safety in shooting. Both plans, whichever used, can have a brass cover (as shown in sketch of Tube Ignition) that will screw completely over them, rendering the gun not only *waterproof* but absolutely *safe* at all times, even though the ignition were not removed.

To keep a stock of caps, tubes, or even matches dry, especially on board a yacht, nothing is so good or safe as an old pickle-bottle. If half filled with sawdust, and the tubes and caps shaken up with it, they will keep forever.

CHAPTER XXII.

Loading—Loading-rod—Powder and Shot—Elevating-wheel—Gun-crutches—Gun-rests—Setting-pole—Paddles—Rudder—Bootstrap—Expenses.

AFTER even a moderately successful shot everything in a punt gets knocked about in dire confusion; oars, paddles, guns, birds, will be lying in all directions. These cannot be kept in their places with neat regularity when pursuing cripples or picking up the spoil. There is not then a moment to spare, but there is plenty of time afterwards, ere in reason another piece of luck may be expected. It is always well to row ashore if near, which is oftener the case than not, and whilst you stretch your legs or arrange the birds, your man, if in a double-handed punt, can reload the gun. In a single you will probably be equally glad of a rest and general overhaul. Whether a muzzle or breech-loading gun is carried, this advice is, I may say, most applicable. Should you happen to be far from land or in shallow water throw out the anchor; if too deep for this, you can drift and recharge at the same time.* If in a great hurry, and fowl have repitched or are in sight not far distant (a *most* rare occurrence after a shot), let your movements, though quick, be sure and deliberate. Do not keep looking at the birds to see

* Still keep the anchor out, and the punt will then drift but slowly.

whether they remain or fly, the gun must be loaded whatever happens. It is only a question of some four or five minutes at most, and even a much longer delay would not usually matter. After firing, at once slip the waterproof cover over the stock of the big gun ; this will keep it dry and clean from salt spray and rust, or other risk of damage.* To load a M. L., if at sea or in open water, and where you cannot step ashore, take a few turns with the elevating rope so as to run the barrel up clear of the coaming ; then disengage the loops from the trunnions (if these are made fairly open this is done instantly), and swing the gun round till the muzzle points aft. Now place a paddle or stretcher under the barrel athwart-ship to steady it, and across the coaming, when all is ready. After a rub out with a handful of oakum (two, if there is time), fill the loading-spoon, or take a powder-charge from the ammunition-box, put it down and leave the powder in the breech,† then reverse the rod and ram home wad and shot cartridge ; a brass nail in the loading-rod showing when level with muzzle that the charge is properly home. Wheel the gun back

* The cover can be made of duck or thin leather. It should pull right over the stock and a few inches beyond the ignition, after the fashion of a stocking. At its open end let it be cut underneath a few inches and fitted with a strap to draw all tight. At the stock end affix a loop or button to pull it off by.

† To do this use a ramrod with its upper surface (when the spoon is filled) planed flat ; this will be a guide to keep you from spilling in the barrel. Have a notch cut on the rod to show you when the charge is within two feet of the breech, withdraw it slightly and then jerk it forward, and with a little practice you will shoot every grain of the powder home to its place in the breech. The oakum wad will push it up as it should be. This can be perfectly done without raising the barrel from a horizontal position as easily by night as by day.

E E



LOADING-ROD

Complete, with hinged Powder Spoon for inserting Charge in Muzzle-loading Swivel-guns.

Spoon of $1\frac{1}{2}$ in. thick copper. Diameter outside $\frac{1}{4}$ in. smaller than bore of gun. For a 11b. shooting-gun length of spoon from end to base inside $6\frac{1}{4}$ to 7 inches.

again, lower it, and all is clear for action. The ignition or priming can be seen to at leisure, or when fowl are likely. If in a double punt, all this can be done as your man is actually paddling towards fowl, or else in the direction you wish to go in quest of them. (For loading-rod, charger, &c., *see* sketch.) If powder cartridges are used as hereinafter described, loading is a simple matter, and a very quick and easy one; but some might consider them too troublesome to make, and I therefore give a sketch of the handiest spoon measure as well; one which can be filled *without lifting the rod*, which I find a great convenience.

It may be taken for granted that three ounces of powder to a pound of shot is a good and full working proportion. It is well to have too much rather than too little powder. Shooters who, by reason of too light a charge, have to aim over birds at sixty yards are at a great disadvantage. You want to see the fowl fair and plain, and to aim straight at them when in range; this cannot be done with light measures of powder. When you hear of or fancy that guns (I mean punt-guns) shoot badly—some high, some low, some weak, some strong—you may depend upon it, nine times out of ten, it is caused by *bad loading* and *nothing else*. When the gun carries over a pound the powder must be increased; for one and a half pounds you will want five ounces, or a little more if the bore is near two inches. A small bore might be used with somewhat less, a very large bore with a little more. I know several shooters who use in their guns of two-inch bore (charge two pounds) an honest half-pound of

powder. Though their guns act undoubtedly first-rate with this heavy measure, they would often shoot as well with one and a half ounces less. The old idea of equal measure for both powder and shot has lost *many* a duck, and will probably lose many *more* ; but it is a fallacy hard to dispel. No punt-gun could or would shoot its best with such a small proportion. In a shoulder-piece we seldom think of using less than three drachms of powder to the ounce, and sometimes more. To equal this with a pound of shot, three ounces, or forty-eight drachms, would have to be put in. Then the wads in a big gun are far larger and heavier to the bore than in a shoulder-gun. A gun loaded, as some are, with two ounces of powder to a pound of shot can only pelt the fowl and manufacture numerous cripples. If you wish to obtain dead birds, the gun should be charged so as to allow level aiming up to sixty yards. Plenty of powder will cause the shot to travel high, and then, when firing, the best part of a company can be selected for the charge, instead of having to aim slightly over them at that distance, and so put them out of sight under the muzzle. This is always the case with a light-charged gun.

If the powder in a gun cannot safely be increased, and it throws low, *reduce the shot* ; it won't be to a disadvantage, or cause less fowl to be killed, but quite the contrary.

When within shot, the percentage of cripples will best show how a gun performs ; nothing is a better test. All the target practice in the world would teach less about a gun than a few shots into a number of well-placed fowl at *fair* range. You

will soon discover if a gun shoot high or low, hard or soft, and learn to vary the load according. Long shots are mere chances, and nothing can be judged by them. If it happen, when land-shooting, that a partridge drop at eighty yards by a lucky grain in the eye, with a shoulder-gun, *that* is no proof of its shooting, or even of good aim. So, in fowling, it is through firing at a reasonable distance a gun must be judged, and not by chance performances at a hundred yards or more.*

Powder.—The coarsest that is sold for duck-shooting. There are two or three kinds—Colonel Hawker's, Captain Latour's,† &c.; one is as good as another, provided it is fresh and dry, and leaves no wet inky moisture after firing. It is easy enough to dry powder without putting it within yards of the fire, by spreading it out on hot plates. If a well-cleaned, thin, and warm wine-glass is inverted over the powder when first placed on a hot dish, it will dull the glass should it be damp. As to wadding, nothing answers like soft, fresh qakum; all the cut and punched wads ever invented cannot equal it for toughness and spring. Punched wads are always liable to turn in a large barrel, why I can't say. I only know they do. The right thing is a hard oval

* I have heard many a shooter declare that a certain gun he possessed was a wonderful killer, as it had at rare intervals stopped a hare or bird at near eighty yards. Never was greater mistake than to judge a gun by chance shooting. Were such performances other than pure accidents (perhaps caused by a single pellet through the brain), Mr. Longshot would succeed in doing regularly what he so constantly endeavours to do without success.

† Captain Latour was in days gone by a very successful fowler with the swivel-gun, and it is told of him that he once obtained near a hundred wild geese at a shot on the coast of Scotland.

ball of oakum, tightly wound with string, once and a half as long as the bore of the gun is wide. When this is rammed home it is then reduced pretty considerably. Balls of oakum sewn up in greased calico do not answer well, as they are not so apt to fit the shape of the barrel both before and after explosion. If made round, they are then too small to act properly as wads when the gun is fired. If made elongated, as they should be, they do better without the canvas. It is always an object to obtain wads that are flat at the ends; they receive the shot and push down the powder better. To do this, all you require is a block of wood, say four inches square, with a hole bored through it some sixteenth of an inch smaller than the barrel. When the wad is bound and formed, put it into this mould, and with a few blows of a plug of wood (made to fit the mould) by a heavy mallet, the ends are flattened. These wads should be well greased save at one end—that for the powder.

Shot.—In the matter of shot, shooters are apt to use it too large, thinking thereby that it will kill better and farther. Now I put random shooting out of argument at once, and say that, from my experience, BB, unless birds are very wild, is large enough. Then BBB may be used for anything save Geese or Swans. Up to the middle of November, when young Wigeon and Teal, as well as Plover, are about, I use single B, and find just as few cripples after a shot as are left by the larger size; and as there are more pellets to the ounce in the smaller, it flies thicker into the birds and kills more at a *fair* range. Of course it is a large size

to use for Plover, but small shot never acts very well from a large gun ; unless at night, when you may steal very close to the birds, *then* No. 2 is best.* For Swans and Geese, SSSG, is as heavy as need be ; it will kill the former just as well as the latter. Some fowlers use small bullets for Swans, but quite needlessly ; they would, I suppose, think cannon balls only fit for Ostriches, did they go shooting them. For shoulder-guns, No. 5 will kill well enough for anything, and not, like No. 4, be liable to scatter, and so let a cripple's head (a very small mark in the water) escape.*

No duck-punt, small or large, is perfect without *Elevating Gear* ; it is of great use in many ways. If near the edge of a bank, and the mud intervenes between the gun-muzzle and a company of fowl, perhaps a few inches of rise may enable a sweeping shot to be made. With an ebb tide, in this position the chance of a shot would, as the punt slowly drops lower, lessen every second, till the birds are beyond all aim, whether flying or sitting. The wheel and rope shown in drawing will enable the gun to be raised at least seven inches, and now and then bring the sight to bear on a fine shot which would otherwise have been lost. If at any time you wish to raise the forward wash-boards in a wave, one not sufficient to bring the gun inboard, a few turns of the rope, so as to raise the gun-barrel, and it is easily done. It also enables the height of the lay of the gun to be altered to suit its shooting. When this is found, a small snick with a file will act as a guide for the

* For further remarks on shot, number of pellets to the ounce, and suitable sizes for various birds, see concluding chapter, page 481.

future. Shortening a gun-crutch, or filling up the socket on the floor into which it fits, are bad ways of settling a gun's height above the gunbeam.

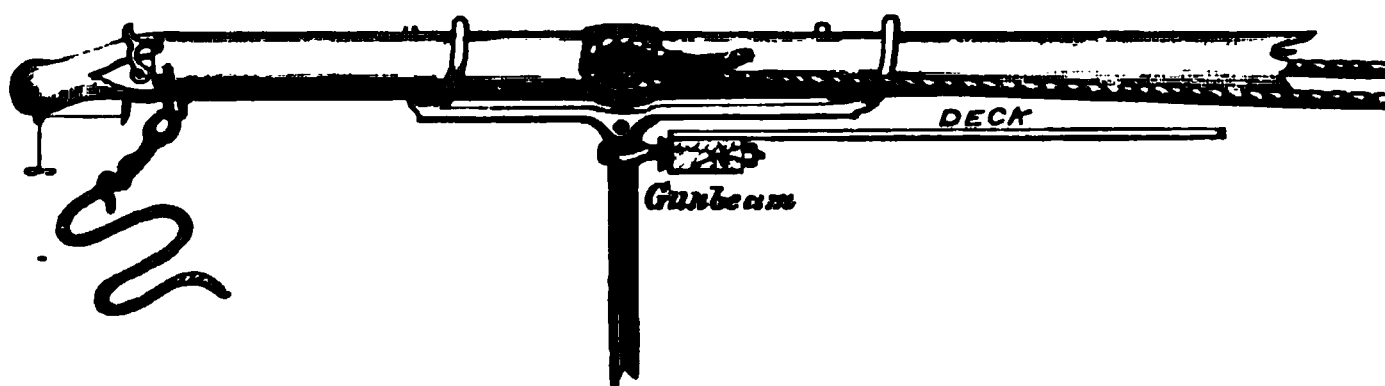
ELEVATING-WHEEL FOR RAISING SWIVEL-GUN.

Spindle and wheel, latter $5\frac{1}{2}$ in. diameter, $1\frac{1}{2}$ in. thick, are fixed together. The former is hollow to near its base (*see* dotted lines), and is wormed for thread of gun-crutch, the shank of which is $1\frac{1}{2}$ in. diameter, and some 8 in. long.

The gun is lifted by hauling on rope. If the small cord is brought taut to eyebolt in floor of punt, the gun can then be raised or lowered by one hand, even as the fowler draws in shot. Material, gun-metal. All working parts to be kept well oiled. Spindle to revolve freely at head and foot. Frame to be bolted to gunbeam. A "stop" near the end of the thread of the shank, and a corresponding screw at the top of the spindle, will prevent the crutch being ever wheeled overboard.

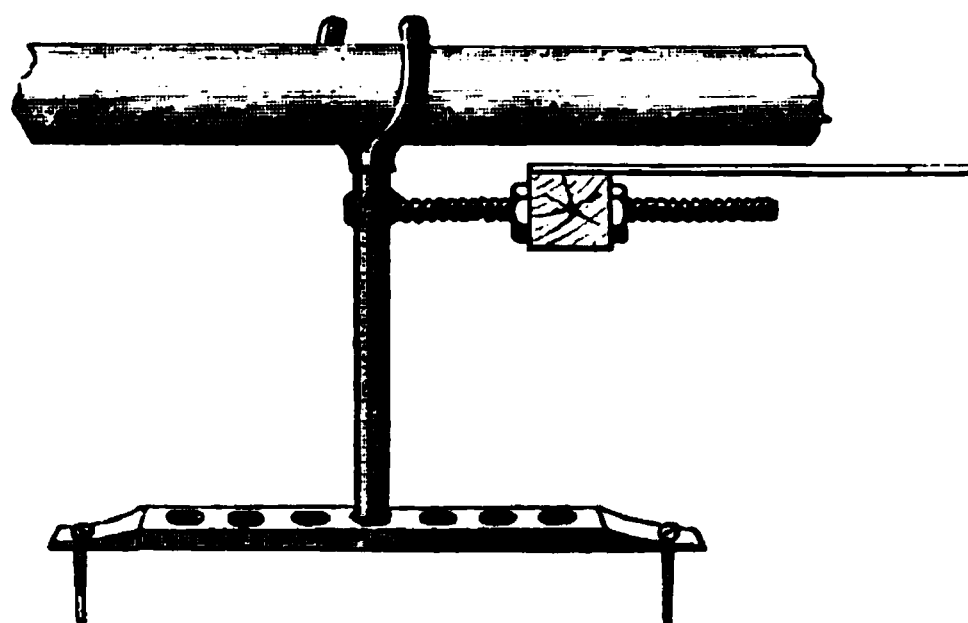
I also give sketches of plain and screw *Gun-*

crutches, as well as plan for shifting the former fore and aft to suit the trunnions and balance of the gun, should such be necessary, together with a *Double-balance Crutch*. The latter is of the greatest service, as it enables the gun to run backwards or forwards freely when fired, and yet meet nothing to injure. This crutch is specially useful should the balance of a gun be too near the trunnions, and at all times it keeps the barrel very steady.



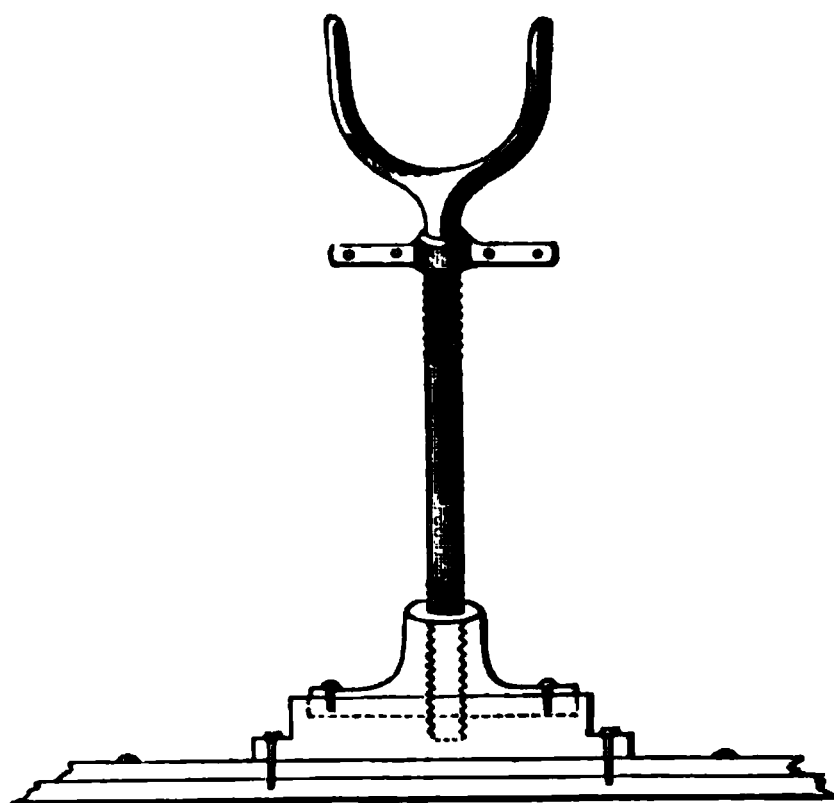
DOUBLE-BALANCE CRUTCH FOR SWIVEL-GUN.

Though not in this instance necessary, this gun is here shown fitted with a back recoil check-rope, the loose end of which is brought taut to eyebolt in punt's floor, or, if used as an extra safety-rope, it can be secured to an eyebolt in gunbeam to the left side of the gun.

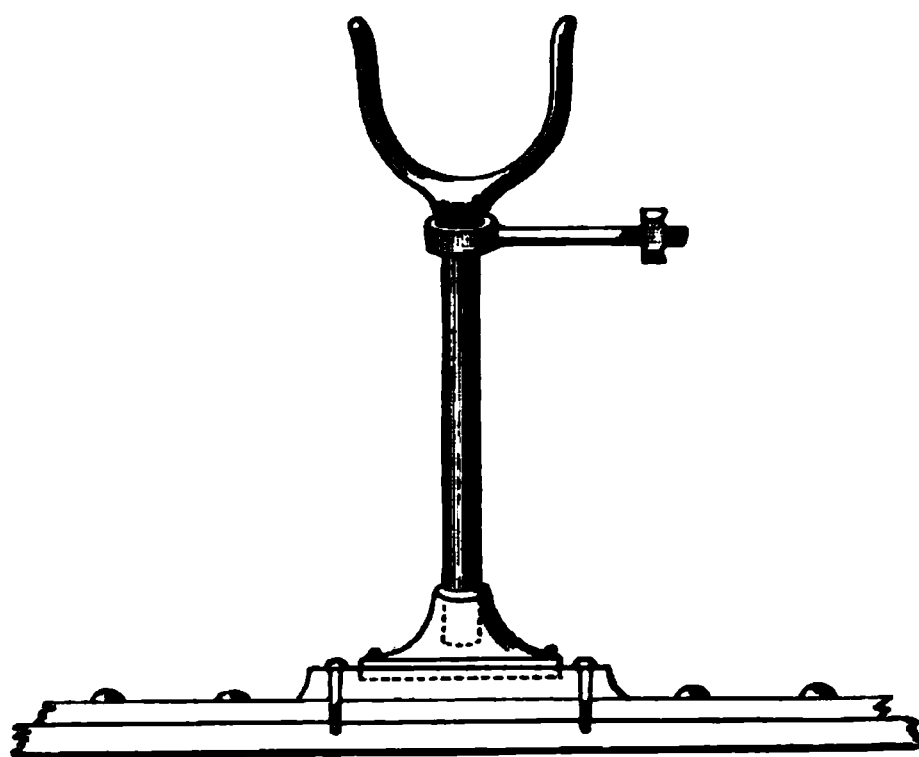


SHIFTING GUN-CRUTCH.

All gun-crutches to have fork covered with thick leather very firmly sewn on.



SCREW GUN-CRUTCH,
Fixed to gunbeam by socket plate.



PLAIN GUN-CRUTCH,
Fixed to gunbeam by eyebolt.

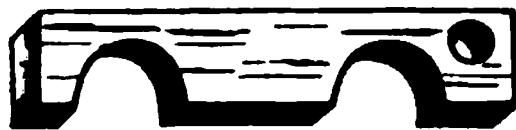
Gun-rests.—In a single punt that is paddled to fowl over each side, the fowler is at a great disadvantage who uses a fixed rest. If he used a movable one, he will say he has no spare hand to see to it; he therefore lays his gun on its rest of fixed wood

to shoot as he would wish to aim it, at a number of fowl at one range only, and a move of his body or a dozen birds in the stern of his punt will put all aiming astray. If he happen on the fowl at a short range, he has to lift his gun-muzzle off the rest to fire down into them (the end of many a punt has been thus blown open). Should the birds be beyond his usual distance, yet not flying, he has to fire from hand entirely and lift the barrel clear of the rest. Some declare they can always do this last act successfully, and so never carry a rest of any kind, excepting a mere thin cross strip of wood, just enough to keep the charge from striking the deck when fired low, secured under the barrel athwart the punt's deck. In my opinion, *no human hand* can hold and fire a large gun at a sitting shot, to its *best* effect, as the same gun would act if it were rested and properly aimed from a steady support. A flying shot is an easy matter in comparison ; but to get the charge fairly among a lot of birds on the ground or water is not really achieved once in three times. I have experienced this over and over again in my efforts to escape the trouble of taking out a rest ; and though at times making excellent shots from the hand, have always realized I should have twice out of three times done more execution with a support for the barrel. This was proved to me most conclusively on several occasions when firing without a rest at large numbers of fowl well placed, in easy shot. Now and again I have so obtained twenty Wigeon, where, had I adhered to the other plan, forty would most surely have resulted from the shot. The least deviation when firing from the

hand, the slightest jerk or flinch on pulling trigger, will throw the charge a little too high or a little too low, and though a good bag may be the result, it will not be as good as it *might* have been ; for however well a number of fowl may be placed, it is no certain affair to put the bulk of the charge aright from a swivel-gun, however simple it may seem. As to flinching, why, not one man in six can snap an empty *shoulder*-gun with perfectly steady hand and open eye. A rest, as some use, with a half circle cut in the surface of it to take the barrel, is a bad plan, as *then* the punt has to be turned accurately towards the birds instead of the muzzle by the shooter ; the latter act the work of an instant compared to the former. A properly made rest is flat and smooth on the top, so as to allow the gun to be pointed to the right or left as required. If you have to wait till you can get the punt directed on the fowl, the shot may be lost. In a double punt, a slight move of either hand, right hand to the right, left hand to the left, is plain enough to understand, and one hand kept up a few seconds and still, as notice to stop, the man in the stern would at once understand. But the puntsman will often as not see quite as well as the shooter, especially if using the setting-pole, and with play on *your* part to direct the muzzle, which a proper rest ensures, *he* can't go far wrong as to direction.

The signs and movements of feet and hands that are recommended by some *writers* as necessary in a double punt are all nonsense ; *shooters* don't think of more than a slight motion of hands as described. To make a rest sit fair outboard, the curve of the

legs or underside must match the round of the fore-deck exactly, and a three-quarter inch hole one inch deep may be bored in either foot and filled with lead to make them sit steady. The long handle I prefer to be on the right-hand side of the barrel, and curved slightly downwards at its end, so as to be in shape with, and convenient to, the stock and hand, when it will be ready for instant use. You can lay the left hand easiest on the gun when lying prone, to take a flying shot if necessary.* Then the rest can be regulated with the right hand (that is, run it in or out), and the toggle of the trigger-string held between the fingers at the same time. This position of the rest-handle is, however, a matter of choice. In the illustrations it is placed on the left, in the plans on the right, of the big gun. To move the rest noiselessly, the barrel may sometimes have to be



HEAD OF GUN-REST.

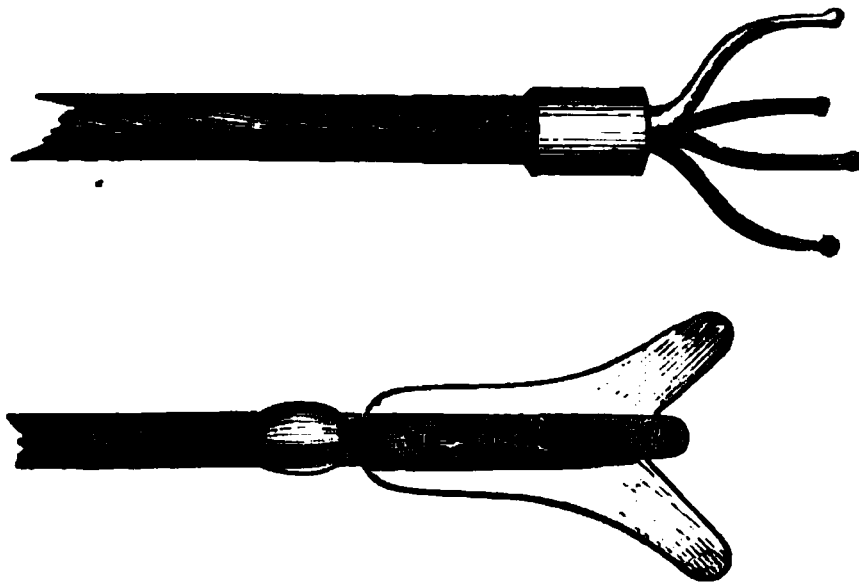
Lower edge to be curved to rest evenly on round of fore-deck, and hollows as shown to take breeching ; substance $1\frac{1}{2}$ in. oak, handle $\frac{3}{4}$ in. ash.

lifted off it, in which case the left hand will be ready to depress the stock. The top of a rest should be covered with canvas, drawn over and laced underneath : nails come out and spoil the barrel. The

* With left hand you can of course much easier direct the aim of the gun, as in a double punt the shooter naturally lies a little to the left of the centre of the floor, as a set-off to the man, who usually lies to the right. The right hand and face then come most conveniently for firing, and aiming along the barrel.

gun will not slip over this as if it were wood. Leather would answer as well or better, but in a punt, to be neat and in keeping, all, even the smallest article, should be of a white colour. When you find where the rest lies when best suited to *ordinary* shots, cut the handle off, or notch it to exactly reach the end of, or some mark on, the gun-stock. This is then a most useful guide as to the elevation and distance for firing at fowl, both by night and day.

Setting-pole should be of tough wood (then it may be small and thin), at least eight feet long, and some inch and a quarter in diameter, with a good knob or cross piece on the handle end to pre-



ENDS OF LONG AND SHORT SETTING-POLES.

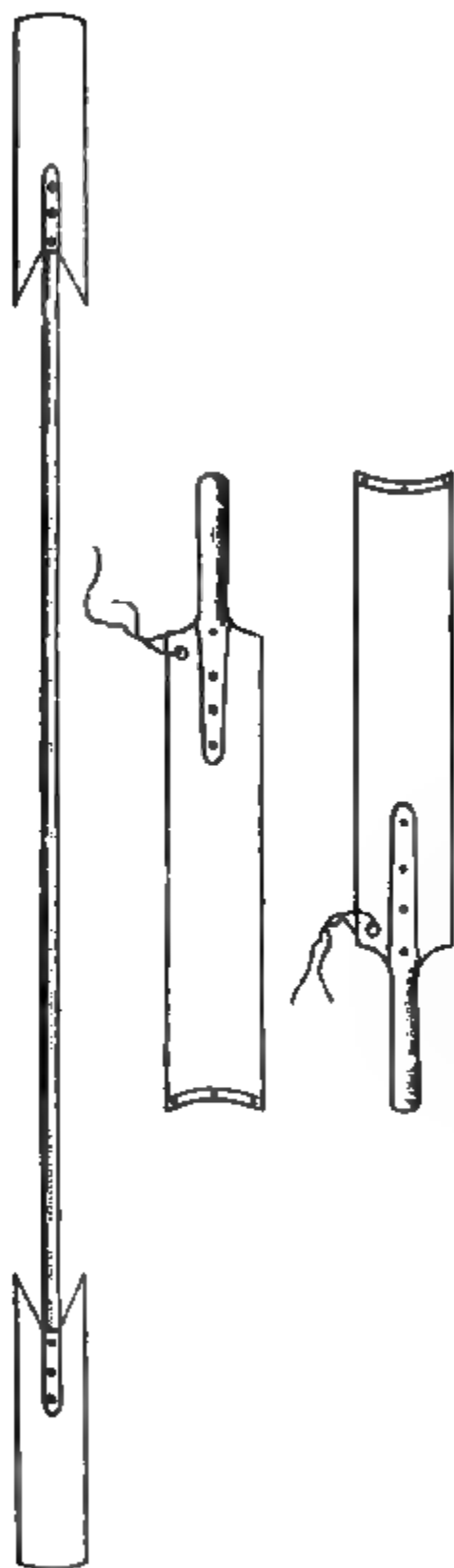
The latter is cut out of a $\frac{1}{2}$ in. elm board, to the grain if possible ; it is then inserted in slit at end of pole, and secured by copper rivets. The enlargements are bands of lead. The long pole-head is $3\frac{1}{2}$ in. across the prongs, small pole-head 4in. from one point to the other.

vent a slip through cold fingers. It should be so leaded that it will float upright without sinking in deep water. The end for pushing should be as shown ; it is the best shape for shoving against soft ground without burying. Don't forget to have a

good catch on the hand end, which may be further improved by a thong of leather to slip the wrist through. To hear your man whisper, or to find from your own grasp, that the pole has slipped just as you are getting well in shot, is no joke. On looking back it will, probably, be seen yards off, standing upright as a monument to your misfortune. Getting at a paddle or oar, or going astern, may raise the perhaps already startled fowl. If crossing a channel when poling, and the water suddenly deepens, ground will often be found by allowing the punt to stand still till the pole stands upright, then a good push may regain the shallow.

Paddles.—For a single or a double punt, when required for actual paddling to fowl, these needs be also weighted, so that they will float upright in the water. For single punts, when side-paddled, the dimensions should be as on next page. (*See* also long double-bladed paddle for cruising in a small craft.) For a double punt, the working paddle should be four feet eight inches long; blade, two feet three inches in length, six inches wide, of thin oak, with willow-handle. (*See* plan of double-handed fowling-punt, Plate 14, page 471.) Another, for following cripples, or stealing quietly about on the look-out for a shot, may be made larger and more powerful, but not weighted as the other: size, six feet total length; blade, two feet four inches—at widest, five inches (*see* same plan).

This latter one is always handy on board. Two men with paddles can send a punt along a very good pace, even against wind and tide. The larger one can be made to act as a little oar, when the oars



DOUBLE-BLADED CRUISING PADDLE FOR NARROW SINGLE-HANDED PUNT, WITH HAND-PADDLES FOR WORKING UP TO FOWL

over all, 1ft. 6in., and $\frac{1}{2}$ in. thick.

5in. These latter being arrow-headed, "drip" to the hand is prevented.

Hand-paddles for working to fowl in deep or shallow water :—

Total length, 2ft. 3in.

Length of blade, 1ft. 8in.

Width of blade, joined through the handle.

Diameter of handle in the hand.

The handles should be quite smooth, without any knob or enlargement to blister the hands. Material, ash, elm, or hickory ; or oak blade with willow handle.

If the safety-cord to gunwale be secured as shown above, it will be found less in the way than when tied to a hole in the top of the handle.

The shorter paddles shown inside cockpit of fowling-punt (Plate 13, Fig. 2, page 467), are for deep water only, and measure 1ft. 10in. over all. Blade $4\frac{1}{2}$ in. across, of elm.

to $\frac{1}{2}$ in. at ends, which should be protected by a copper strip rivets with rooves : nails work loose.

ould be rather flat in their round, so as to be easy to grasp or would be quite smooth, without any knob or enlargement to blister the hands. Material, ash, elm, or hickory ; or oak blade with willow handle.

If the safety-cord to gunwale be secured as shown above, it will be found less in the way than when tied to a hole in the top of the handle.

The shorter paddles shown inside cockpit of fowling-punt (Plate 13, Fig. 2, page 467), are for deep water only, and measure 1ft. 10in. over all. Blade $4\frac{1}{2}$ in. across, of elm.

themselves are perhaps inconveniently stowed away under the deck. It may even be used with a small spur fixed to ship into the coaming. It can be let go of, or laid down in an instant, to fire at wounded birds, after a shot from the big gun, which an oar cannot without being brought inboard or placed athwart-ship when it rolls about, whilst your man in the stern continues to paddle and twist you about as may be necessary to retrieve the cripples. An oar, if "get-at-able," is more powerful to push up to the wounded ; but then you have to reduce the strength of your stroke to keep match with your man paddling in the stern. If he had an oar, when you laid yours down to fire, he could not manage



LONG ASH PADDLE, OF IMPROVED SHAPE, FOR GENERAL USE IN SHALLOW WATERS ABOARD FOWLING-PUNTS WHEN *NOT* SETTING TO FOWL.

Total length, 6ft. 4in. Blade, 2ft. 10in. long, and 6in. broad at widest ; $\frac{1}{4}$ in. thick at edge, $\frac{3}{8}$ in. at centre, $\frac{1}{4}$ in. at point. Handle 2 $\frac{1}{4}$ in. broad at hollow for hand ; $\frac{1}{2}$ in. thick inside hollow. Neck of handle, 1 $\frac{1}{2}$ in. diameter. If this shaped paddle be used in a double-handed punt for actual working *up* to fowl it can be similar in shape, but 1ft. 6in. shorter in handle, and blade 5in. broad.

the punt or direct it, as with a paddle, whilst you are finishing off the pensioners. All oars and paddles that are used in a duck-punt should be quite straight ; if spoon-shaped, they will soon give under the severe strain of constant shoving against the bottom in shallow water which they will have to

undergo. As they cannot fail to be roughly used out fowling, if unprotected they soon get ragged at the ends. Be sure, therefore, they are well bound with a broad strip of copper, not lightly tacked on as is usual, but carefully riveted through with short stout copper nails and washers of the same material.

The Ammunition-box is no unimportant article among your belongings. It should be as waterproof and damp-resisting as possible. It ought almost to bear immersion without leaking, could it be so made, as it may at times, as it lies on the floor of the punt, nearly undergo such a severe trial. It can be lined with sheet copper (tin soon rusts), made of half-inch oak, or better, three-quarter-inch, and with partitions to neatly take the description of ammunition used by the shooter. If a round cork-stuffed life-saving cushion is carried to sit on when pulling, the lower the box can be made the better, paying respect to what it has to hold. It need then be no higher than to take a powder tin or cartridge, laid flat, and it will, though broad and long, be very portable, and have no high bulk to take up space. Should you want as much room as possible, especially in a small punt, and do not carry a cushion, the ammunition-box may be used as a rowing seat; it can *then* be made square and the height that is most suitable for pulling. Whatever kind it is, the lid should overlap at least an inch. This is best made without hinges, and is more waterproof when fitted over loose, as a rain-protecting ledge can then be continued all round it. It is a handy plan, as the charges can be got at under the side or deck of the punt, where the lid could not be raised. It may be fastened by

two locks, or two small padlocks, at either end when required.

Boxes like these cannot be made quite impervious to wet, without a cover dropping well over them from the top to cover the lid joints. A white painted one of duck or canvas answers well. Such strong stuff will not readily wear out, if you use the box as a rowing seat.

Rudders.—With a good paddler in a double punt the incumbrance of a rudder can be dispensed with. In a single it would require another hand to manage it, if not two, when other matters, such as gun, paddles, and firing, are to be thought of. In sailing, a paddle is far preferable to a rudder; with the former, the punt can be both steered and helped up to her course by an occasional stroke this side or that, which a flat-bottomed craft is sure to want, unless the wind is nearly aft. This can be done in one movement. A rudder could only steer. If, however, a rudder is fancied, let it be rigged to ship and unship easily.

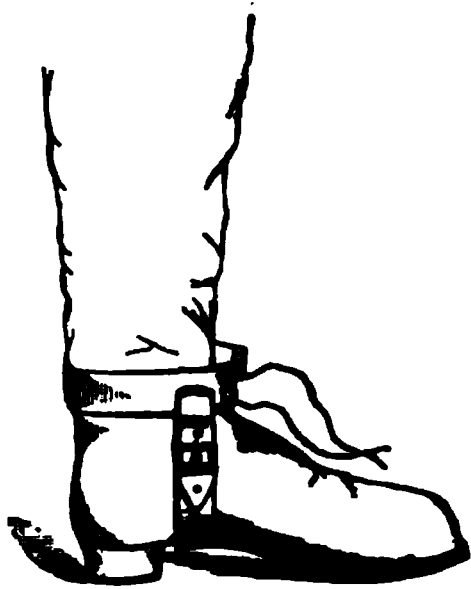
A punt draws, we will say, three inches of water; a rudder continuing the line of her extreme draught, would be next to useless and have little power. It should drop at least three inches or more below the floor to be of service, and be fitted so as not to catch when striking a shallow, or progress would be stopped, as the extra depth of the rudder would otherwise sink in the ground and hold the punt. I give the shape that I have found to answer best, as it will not hinder a backward course, and will lift when running over a hard shallow. But, after all, the best of rudders are, to my mind, in the way,

and more fanciful than useful. (For suitable rudder see Plate 14, page 471.)

Clothes.—To a duck-shooter this is no insignificant subject, not alone as regards his health, but with respect to his success in the sport he seeks. A shooter may dress lightly and feel a chill but now and then for a few seasons. He will, perhaps, boast of his hardiness and freedom from ailment; but he may rest assured that for every *shiver* he will have acute rheumatic *pains* in later days, should he live much beyond middle age. The great enemy to a duck-shooter's health is rain and wind combined; and fresh-water shooting is for this reason less preferable than the tide. Salt-water, with common care, does little harm. Rain, or fresh-water, is the father of rheumatism. *Flannel* (grey is best) from *skin* to *coat*, and *plenty of it*, is the one and only safeguard as to future strength in years to come. Flannel soaked is no doubt heavy, and far from waterproof, but it is not as cloth in the same state, and has good qualities in wet or cold no cloth *ever made* can pretend to. As an overall, a short white duck-jacket must be worn for the sake of colour; flannel soon looks dark from surface dirt, at a short distance. Duck will wash well, wear well, and is no bad stuff to turn wet either.

Thin waterproof oilskin trousers, reaching to the knee, no farther, or they will be in the way. These should be always worn, as the floor of a punt is never quite dry, and often very wet, when you lie down to approach fowl. As to head gear, a round white cap with a small peak or a very narrow brim is best, and answers well if made from a

Diver's skin, *not* a Gull's. A cap with a falling cover behind it is a nuisance; when lying down this will come against your back and tip the front over your vision just as you prepare to fire. Sou'westers are worst of all for this reason. If snow lies all around, you will get nearer to birds should a white linen cover be fitted to button over the cap, which may *then* be an ordinary cloth one. The cover can be washed snow-white now and again; this cover can be removed at the day's end,



SPUR STRAP FOR DUCK BOOTS.

and you are not then so likely to be shot at as a ghost, or chased as a lunatic, when stepping home in the dark. As to long boots, they can't be too light and pliable in reason, but should never be walked in on the roads; they are not meant for that. Have them large and loose, so that at the end of a hard day you have not to dine in one, or perhaps both, but instead, they may be pulled off like a pair of old gloves. When boots are easy the difficulty is to walk in them in sticky, but not bad

ground, without pulling the heels half a foot up the inside every step. To obviate this see sketch of spur strap. To keep them dry and soft, nothing beats good neat's-foot oil or vaseline well rubbed in long before using; the thicker it is the better for the purpose.* To take off dampness (if not somewhat moist inside they are unhealthy), keep a linen bagful of oats and fill the boots with the grain by night, letting it dry by day. This will stretch the leather and keep the shape without straining the seams, and so cause a leak, as will "trees." Do not let your bootmaker put any lining whatever inside on any pretence. In fowling, the toes are the first to give, and so require extra protection from the first day; done afterwards, it is always a patch-up, leaky job. The feet of all long boots may be fairly stout, but from the ankle up they should be of thin material. You will require a broad leathern thong from the outside top of each boot that can button to a strap round the waist, or else when soaked they will fall down in wrinkles and crack. This belt strap is very useful for knife and cartridge bag, which articles should be made to hook on to it (*see* page 383).†

Expenses.—It is high time to say a few words

* A well-known wildfowl-shooter last winter recommended to me castor-oil, and says he finds it superior to all else as a waterproof dressing for leathern boots. India-rubber is a very unsatisfactory material; it soon gives way under hard use, and, besides other drawbacks, such boots are most unhealthy to the wearer.

† I will not touch on the food question further than to say that a small bunch of raisins are equivalent in their sustenance to a couple of sandwiches and a glass of sherry for luncheon. Raisins are meat and drink in one, besides being portable and easily procured.

on this ever-important head. As I have elsewhere said, when fowling is extensively undertaken, and pride is shown in keeping guns, punt, and gear in perfect order, it is no sport for a light purse to engage in. There is a slovenly method of duck-shooting as well as in other sports, such as leaky unpainted punts, and dirty, stock-shaking guns, rusty cripple-stoppers, and above all unsuitable clothes. All these items, when as they should be, not only add largely to sport, but to comfort as well. Appearance and order in a duck-punt are more necessary than some might fancy possible. There needs be a place for everything, a well-known and exact one too, and one taught by experience to be the best, and everything must be in that place, down to the smallest article on board. I hear men at times point to professional fowlers or anglers, and say how such folk with dirty punts, inferior guns, and common fishing-rods and tackle, excel gentlemen with their more perfect appliances. So they might; but if they do, it is from their long-taught and superior knowledge of "where" and "how," as well as their never-flagging exertions. But look at this piece of wisdom in another light. Let the poor men use punts, guns and tackle in perfect order, which *they* can't afford to do, how much *more* successful would they *then* be to what they *are*! so let nothing, whether time or money, if you can afford both, be spared in reason to keep all in perfect order.

List of articles required in double-handed shooting:—Punt, punt-gun, two single shoulder-guns, gun-crutch, gun-elevator, shifting hand-rest; two

small oars (not too heavy, or they cannot be used as sculls); two paddles, one light, for working to fowl, the other heavy, to assist in propelling to cripples or for cruising; glasses or telescope. If looking for rare specimens, the former will not tell them at a distance, but for night-work are invaluable. Rudder, if you use one; mast, boom, sail and sheet in one; breeching ropes; ammunition-box; cork-stuffed life-buoy seat; setting-pole, eight and a half feet long; small setting-pole, for shooter to give a helping shove when badly stuck, four feet long; folding anchor or grapnel, with thirty feet of half-inch line; four spurs, one a spare one; two foot-stretchers, used when pulling, or to secure flooring-boards; cover for gunstock, to reach well beyond ignition; cartridge-case for small guns, with extractor fastened to it; sandwich, tobacco, lights, compass, and flask in case to fit; loading-rod and powder-spoon; worm-screw for cleaning the barrel or drawing charge; powder, shot, wads, oakum, and ignition; canvas and wood covers for big gun; cover for punt; gun-muzzle plug; punt waggon; and last, not least, a good sculler. If a breech-loading gun is used, cartridges, extractor for same, and its other belongings, instead of some of the items above given.

In a single punt the extra setting-pole can be dispensed with, as well as one shoulder-gun and the rudder; that is to say, for a punt that is propelled up to fowl by side-paddling. When a single punt is sculled with an oar to birds, the two small hand-paddles are not required, but one large one for moving leisurely about in search of fowl is most

useful. For getting up to cripples in a single-handed punt the sculls will be used, and you can kneel with your face to the stem, and push oar up to the wounded. Did you pull you could not keep an eye on them from the moment you fired, as is of course most necessary when retrieving after a shot.

To cover expenses of two men, attendant boat, powder and shot, &c., poor fowlers would have to put aside at least 100 fowl per month, valued at a shilling apiece, ere they could look to gain. Say they made £1 10s. a week profit (nothing much less would repay them, when travelling and other expenses not named are considered), they would have to kill at the rate of 220 a month, or about 1,000 in the season. Against the profits would be the fowl given away (which they would have to do more or less, or their shooting would be little), small birds, for which a low price would be given by the dealers, and their carriage to the nearest town, perhaps thirty miles distant; for good bags are not made near the haunts of men. Besides this, a shilling apiece is a high price for Wigeon in Ireland; eightpence is nearer the mark, and when plentiful sixpence. Duck are always scarce, as they keep, except in severe frost, which does not often occur in Ireland on the inland lakes and bogs. Geese, though valuable, are only in few harbours to be had in numbers (and in these they are well persecuted), except, like Duck, in severe frost. They then, though abundant and tame, soon get thin, and a small value is set upon them by the buyers. No one, I may add, who values his life more than a Duck's, need attempt coast-fowling in Ireland in

a single punt or without a following boat, lest he be in sheltered creeks and harbours, in which, though fair shooting may at times be had, fowlers abound and sport is inferior. On the wide, unsheltered estuaries, where fowl are plentiful, they cannot be overreached but at a considerable outlay of local experience and money. Though the gentleman fowler, purse permitting, may overcome each separate difficulty if so inclined, for the sake of sport, the poor shooter, if *he* did so, would be left little, perhaps no profit. With the very best and most costly of arrangements, I consider six to seven hundred fowl with a double punt and an attendant boat a first-rate season.* It is only in the *most exceptionally* favourable winters,† perchance

* With a single-handed punt and small gun to match, say one shooting from twelve to sixteen ounces, without a following boat, and in creeks and harbours that can be safely so shot, from three to four hundred fowl would be a good season. I do not take Curlew into consideration, when I talk of fowl or small waders; they are held in little esteem in Ireland and valued at a trifle. As to Plover, though they visit a few estuaries in large stands, it is only for a short time in the beginning of the season. They rather frequent, in winter, large green reclaimed fields and low lands, where they cannot be reached by the duck-shooter, though the netters sweep them up in hundreds, and it is only at rare intervals that heavy shots are obtained at them.

† We have, however, had no lack of suitable seasons in Ireland for Wildfowl-shooting of late years. A good many weeks of the past three winters have consisted of real downright hard weather for a month or more at a stretch—regular blood-freezing, pipe-bursting, pump-choking frosts; “Adam’s ale” selling at so much a bucket in the streets; a clear steel-blue sky week after week; the sea silent and still; twenty degrees of cold at nights. Even those demons of wariness, the gun-shy, punt-avoiding Brent, let us poor fowlers for once in a way rake them fore and aft in fine style.

Extract from my shooting journal :—“Jan. 24th, 1881, 9 o’clock.—Just come on board for breakfast. Been out all night and since 3 yesterday afternoon. Grand weather and sport; fowl on all sides in

once in several years, that such heavy bags as I have recorded in these pages are to be obtained.

Fowling from an inn or cottage on the coast is not much less costly than from a small vessel ; but being tied down to one spot, perhaps shared by and as convenient to other shooters as to you, the sport will not be so good as though afloat, but more luxurious. A gentleman shooter and his men are a Godsend to "mine host" in the lonely winter months, and a visitation to be made much of by "Boniface."

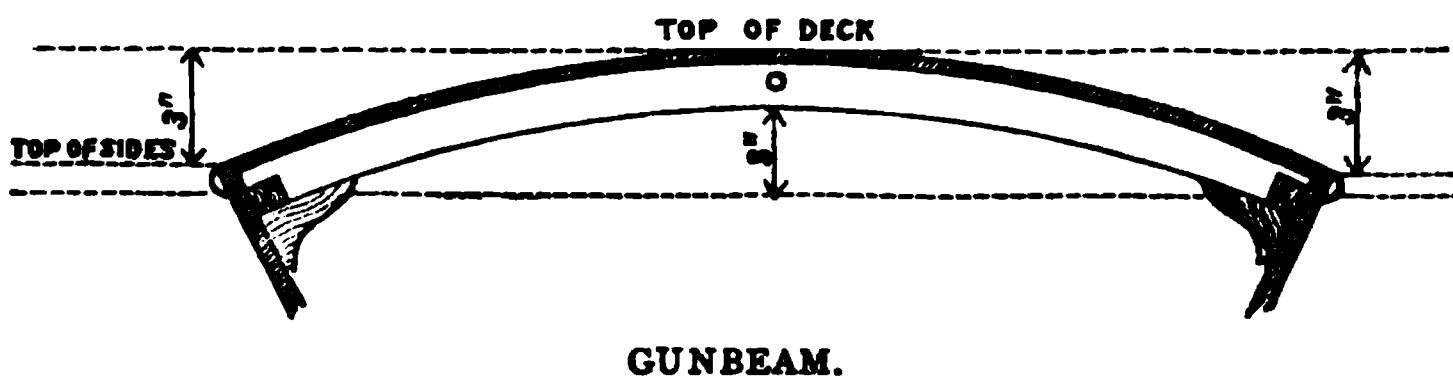
great abundance, especially Duck and Teal. Cold bitter, but most intense just before dawn. Paddles, oars, guns, and movables froze tight to each other or what they rested on. The only chance of thawing my trigger-hand was now and then to shove it under the wing of a fresh-killed bird or between a couple. Brought in, etc."

"Jan. 25th, 1881.—Come on board to dinner. Left this morning at 4 o'clock. Snowed hard all day ; bright sky since dusk. Thank heaven ! no sign of thaw or of weather breaking up yet. Frost has now lasted with unexampled severity three weeks. Fowlers higher up the water hemmed in by ice. Birds all down here with me in the open. A great many strings of swans flying across sky, heading south and south-west. Cold at night perishing, but sport by day and night superb ! Great destruction of small land birds ; hundreds of them drifting about the shores as food for Gulls and Crows to squabble over. Brought in, etc."

CHAPTER XXIII.

Fowling-punts—Explanatory Notes—Building and Dimensions, with Directions in the use of—Plans of Gondola and Light-draught Boat.

THE round of the gunbeam in a punt shows the curve and height of the decks above the sides, as all the deck-rafters fore and aft are cut by and take their shape from this one, though their lengths vary. The thickness of the coaming in a double



Showing how to measure curve of decks above sides.

punt should be $\frac{1}{2}$ in., in a single $\frac{3}{8}$ in., and only slightly flared outwards, or they will cast a shadow on the deck.

The difference in length between the measurement over all, and on floor, gives the rake of stem and stern ; the former always to be given an inch more rake than the latter. The width of a deck-rafter or a floor-timber means its measure taken across the surface when in position ; its depth,

from the upper to under edge, when fixed across the boat.

All fowling-punts should be built with a swell aft of midship section ; that is to say, the beam halfway between midship section and stern should be from 3 to 5 inches wider than halfway between midship section and stem, as the craft is large or small. The spring of a punt's floor should run from the stern to one foot aft of her midship section, with a drop of not more than an inch, and then gradually increased out to the stem.

In a single-handed punt the greatest beam should be 10 in. aft of her midship section. This will not be too far aft to hide the motion of the fowler's arms, and will divide the weight of man and gun near her centre. In a double punt it should be at the midship section or centre of length. In narrow single punts up to 2 ft. 6 in. the floor may be built of a 16 in. to 18 in. plank for the centre (this will then take stem and stern rigidly), the breadth being made up by a narrower plank on either side. The joints on the floor of all punts to be covered by thin ribbons of $\frac{1}{4}$ in. wood 2 in. wide, to prevent leakage, and to permit the seams to be filled from the outside if necessary. The raised rail that connects after ends of coaming in a punt, and of the same height, should be $1\frac{1}{4}$ in. wide, and be riveted to the large beam underneath (twice as large as the other rafters that support the decks).

The after end of centre fore-deck plank is nailed down over the gunbeam, and a $\frac{1}{2}$ -in. by 2-in. wide oak fender over all between the fore ends of coaming. This looks neat, and will prevent the

gun from at any time bruising the deck at this place by resting on it. Many fowlers build their punts with an absurd rake of stem and stern—nearly a foot to each end sometimes. This only gives more surface to catch the wind without any increase of space, power, or buoyancy. The floor-timbers and knees of a punt can be placed alongside each other or apart; that is, the knees halfway between every timber. If so placed, they must meet and cross as well as be riveted together a few inches at the centre of the floor. If placed alongside the timbers, a pair of knees to each other timber, and riveted to both them and the floor (as in breadth plan of gondola, Plate 16, page 474), they need only just meet. In a stout floor of $\frac{3}{4}$ -in. substance, they may be put between the timbers, which need not then be so close together or numerous: this, though giving slight additional lightness, does not so well assure the *strength* of the craft. More spring than $2\frac{1}{2}$ in. or $2\frac{3}{4}$ in. on a punt's floor, would make her a better sea-boat; but then her stem would be slightly out of the water, and as the wavelets met it, cause a slapping noise that would alarm fowl when setting to them; as well as render a punt liable to spin on her centre when driving her in a beam wind to birds.

The stem of a single punt should come just as far inside along the floor as in a double; if it fits over a knee or timber, all the better for strength.

The back recoil-rope to a gun may be loose at both ends, one end tied to an eye, under the stock (a hook would snap off), the other end hitched taut to a ring-bolt fastened to a slab of oak riveted to

the floor, just beyond the gunstock, that comes up through, and level with, the ceiling boards. This rope will easily secure the gun from running too far forward after firing, and does not hinder a flying shot as would one placed athwart-ships. To hinge up and hook together fore washboards in a sea not bad enough to take the gun inboard, run the barrel a few inches out towards the bow ; this will slacken the breeching. The stock can then be strapped down to a ring on the floor or a stick put over it, the ends of the latter propped under the coaming on either side. Now hook the boards together and lead the ropes over them. Should the gun be brought inboard, the back recoil-rope can be fastened to the eyes of the breeching, and its other end to the floor ring-bolt. In this position the breeching will always be kept its proper length when not in use. The portions of a punt's coaming that hinge down for the fowler's arms to go through when sculling, paddling, or using the set-pole, should be made to hinge inside the cockpit, or lift out bodily. I have shown them in the plans falling outwards in order that their *position* may be clear. But if they hinge down the other way, that is inside, they are far less in the way of the arm, and much more convenient as well. When a single-handed over each side-paddled punt is long and narrow, she will be very apt to run off her course, should the wind be hard abeam, when setting to fowl. To obviate this, place a little upright copper pin $2\frac{1}{2}$ in. high and $\frac{3}{8}$ in. diameter on the extreme edge of her gunwale, either side in a line with the rowing spur. Nail

a tiny leather loop on an oar 18in. from the handle end to fit this pin easily, and so that the oar will hook on to it and the blade hang edgeways in the water. Ship an oar thus on the leese side when the wind is strong abeam, and acting as a lee-board without in any way hindering the paddler; the punt can be shoved her course straight as an arrow when set to birds in a side breeze.

The number of deck beams given in plans does not include the large gunbeam that ends fore-deck, or the beam that supports fore end of after-deck. The upper edges of the sides of a punt must join the top of the stem and stern in quite a straight line, or an ugly hog-backed shape is given, and one that has no advantage in any way. One foot should be the width between forward ends of coaming in all punts, and about 1ft. 6in. between after ends in a double, and 1ft. 4in. in a single. A good sea-boat is a fine thing no doubt, but high decks and coamings in a punt are very much against success in procuring birds or getting near them. The width of floor given in measurements means over all outside.

The floor of a duck-punt should be perfectly smooth and devoid of all projections outside, such as keel or bilge pieces. These only act as obstructions when shooting fowl.

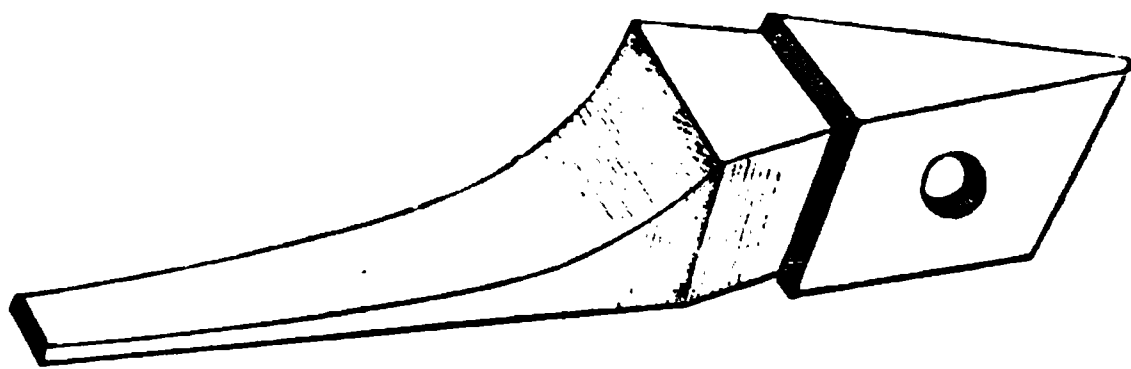
Some punts are now built with the centre plank the lowest, and the side floor-planks fastened to and overlapping its edges a couple of inches. It is, no doubt, a very strong and watertight method, but has the great disadvantage of requiring more water to float in than does an even floor. It

also causes a punt so built to be hard to turn on soft mud or sand when a quick change of direction, perhaps only a few inches, may be of the utmost importance to obtain a shot. Another thing, a floor on this fashion sucks the ground terribly, as, by reason of its manner of build, no kammel or round can be given the punt athwart-ship, and without which she can never be properly buoyant at any time, or easy to move in very shallow water or on the ooze. If you want a large punt for a heavy gun, her floor may be three-quarters of an inch thick. There is then ample substance for rabbeting, which latter, if well done, will obviate leakage and require but little filling between the seams. But a slightly open seam, to take moderate and light filling, is always a good thing. On no account will tonguing the floor-planks answer. With the springing of the bottom the thin projecting strip is sure to split off. Though the stem and stern of a punt need be very strong, let them, however, be no heavier than necessary. Yet by these blocks, remember, all the recoil is taken and general strength ensured.

I have seen many duck-punts fitted with an upright stem and stern. This is not only a clumsy but a bad plan. The life and buoyancy of such a craft depends greatly upon the flare of the sides. With upright ends this flare cannot be run within three feet or so of the extremities. In a sloping stem and stern the flare can be led evenly fore and aft the whole length. There is then no sudden twist in the side-planks as they draw near the ends, as there is, and must be, in the other plan, when

they begin to get wall-sided, as they cannot but do, as the stem and stern are neared. When the flare is continued the whole length—beginning, in fact, from the very points of the craft—it gives her far greater stability and life in the water, whether pulling, paddling, or sailing, and, as a secondary consideration, a much more graceful outline. With an upright cutwater and stern, the top of the stem is, by necessity, the same width as the bottom ; therefore the deck and floor are of equal breadth, and the sides quite upright for some distance.

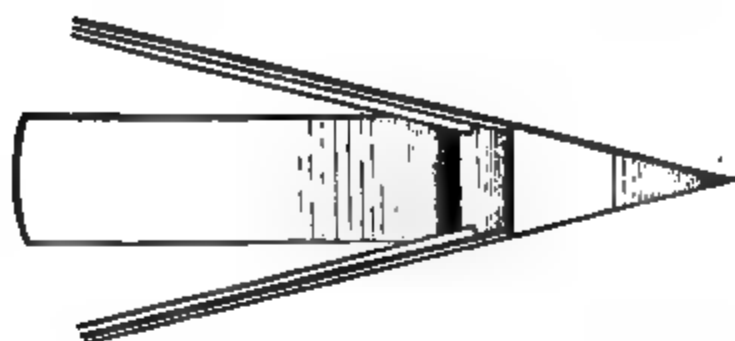
With a sloping stem and stern, the surface or upper part is the widest, and the sides then take a flare at the start. With a heavy gun in proportion to the punt you intend to build, the more the sides are flared out forward the easier your craft will carry the extra weight. As the stem of a fowling-punt is the very “corner-stone” of its construction, I here give several cuts to illustrate its formation.



STEM OF FOWLING-PUNT.

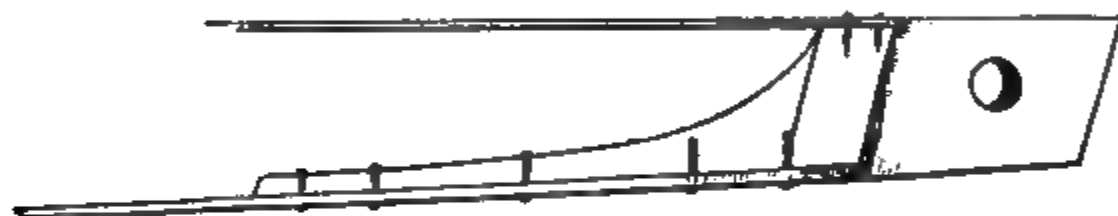
To be cut from cross-grained English oak or elm, for should grain run with stem the wood is apt to split after a time.

The stem should be not less than 1ft. 10in. to 2ft. 4in. long, and 3in. to 4in. across where cut down to receive end of centre fore-deck plank ; 6in. to 7in. on face to this point, and 3in. to 4in. of substance along which to nail sides and deck upon.



SURFACE OF STEM.

Showing how sides and side top-edge strips are butted into stem and stern. The floor-edge strips should be treated similarly.

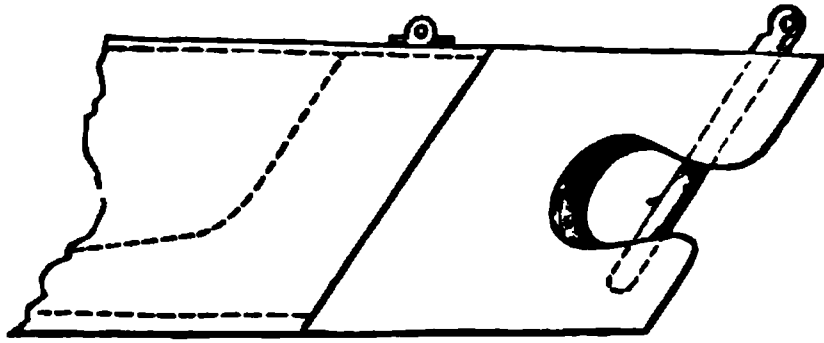


STEM-PIECE FITTED, WITH SIDES REMOVED.



STEM OF FOWLING-PUNT

Fitted with elm breast-piece (to ensure extra strength) of $1\frac{1}{2}$ in. to $1\frac{3}{4}$ in. thick. Upper cut shows starboard side removed, lower one without deck. Length of breast-piece, 1 ft.



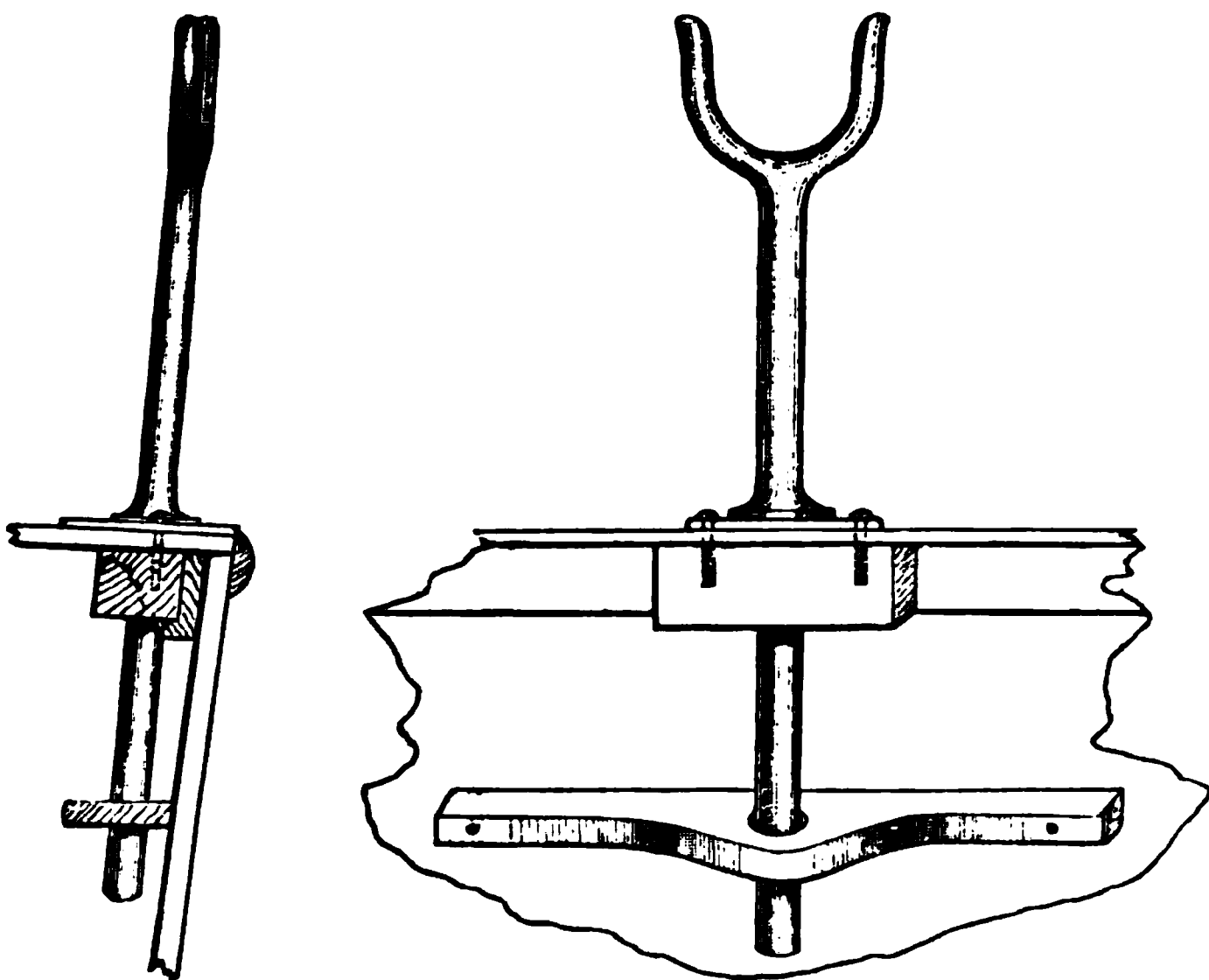
STEM OF FOWLING-PUNT

With drop-pin so as to remove rope-breeching easily. Head of pin to be secured to staple by piece of light brass chain.

A duck-punt with well slanted-out sides, though they *do* at times cast a dark shadow, especially when viewed sideways, will meet a wave far lighter, and will drown in a sea a wall-sided craft, though the former may have but a couple of inches more flare in its sides than the latter. The stern of a well-proportioned duck-punt must always be high, compared to the stem. In a punt, it is under the after-deck that the sculler or paddler puts his feet and legs. If built too low here the water is very apt to sit on the after-deck more than it ought. Besides this, a low after-deck and stern reduces considerably the buoyancy space and carrying power of your little vessel, to no good end. A punt can be covered with some kind of material to deaden her colour, preserve the wood, and stop out soakage and leakage through the thin decks, which would make them heavy. Now, canvas is, over a punt, much too weighty, not only in itself, but in the pounds of paint it will suck up ere properly coated. Linen can be got so wide that it will cover the entire decks, fore and aft, in one piece, and will, therefore, fit close, without a wrinkle, needing no tacking save

at the edges, which canvas, besides its other disadvantages, cannot be made to do.

The linen should be well shrunk before laying on. It will last five seasons, when it is easily replaced. The *spurs* for pulling, pushing, and sculling to fowl



HOW TO FIT MOVABLE ROWING SPURS TO SIDES OF A FOWLING-PUNT.

Total length, 12in. to 13in. ; across opening, 3in. ; diameter of shank, $\frac{3}{4}$ in. Material, gun-metal.

in a double punt should be placed as shown in plan of same (Plate 14, page 471). The centre pair for sculling (not to fowl, of course). The starboard centre spur (one of these last) and the port quarter one will answer for two men to pull an oar apiece, or pull and push, or both push,

as they fancy, or occasion demands. The small starboard quarter spur, the aftermost one of all, is for sculling to fowl only. Of all things, avoid fixed rowlocks raised from the decks, or even blocks into which thowl-pins fit. Both plans are equally unsightly, and in the way. To fit spurs, see sketch. This method is neat, simple, and strong. They can be shipped and unshipped in a second, the decks being then level and without projections, always a great thing in many ways. When shipped for pulling, the spurs can be so high that the oars just clear the coaming. From this, therefore, judge their length and height above deck. Each spur requires a safety-cord spliced round its shank, and lead through a hole in the coaming, the inside ends of the cord stopped by tiny wooden plugs, which latter will serve to fill the socket-holes, if the spurs are not in them, as when setting to fowl. The brass plate that separates the collar of the spur from the deck will prevent the latter from being damaged.

The *oars* in all punts, especially in single ones, should have pretty stout leathern collars just above their rowing balance, so that they can be let go of and yet hang safely in the spurs, or be taken up again as wanted, when chasing and firing at cripples.

If the oars are hooked over plain thowl-pins instead of spurs by loops of leather, this same loop will answer for hitching an oar over the little pin on the gunwale to keep the punt to her course in a side-wind, as before described (page 448).

Some protection from ice may be wanted on the forward part of a punt's sides. Do not affix copper

to a small craft ; it is heavy in water, and requires so many tacks to keep it on, and others in fresh places for renewal, or when it loosens. This tears and racks the sides badly in a few years. What answers better is a thin strip of oak, some quarter of an inch thick and three to four inches high, on the lower edge of either side, and level with the floor. The same screws and nails that hold the side-planks may go through these strips into the bottom edge and inside floor-strip. When, after many seasons, this wood may happen to be worn through, replace it with new, and no fresh holes, as with copper, will be required. These strips, one on either side, forward, may be fined down and meet at the cutwater. They should be four and a half feet long, and bevelled off at their upper edges, and they will be a source of strength to a light-sided craft.

To stuff all seams and joints outside that you can get even the point of a knife into, use putty made of red and white lead well mixed. As to colour, a dull unreflecting white or very light slate is best. Not a "green," to imitate the sea, as I saw not long ago on a fowler's punt, and was informed by its owner (a novice) imitation of the water was the reason of its peculiar hue. Punts are nearly always built *far* stronger and heavier than they need be. If they were *twice* the size they usually are, the floor would scarcely require to be an inch thick. When I hear of fowlers building small single punts with an inch thickness of floor (oak even sometimes), I wonder they don't make them of *iron* or *copper* at once.

There are two descriptions of single-handed duck-punts : one very narrow, for *hand-paddling* to fowl over either side, the width of which may, however, be slightly increased, if the fowler who uses it has a very long reach of arm ; the other for *sculling* to fowl by means of an oar over the starboard quarter worked in a spur. This latter is the larger, more comfortable, and safer craft of the two, as it need not be narrow, as is necessary in the former. It will also carry a heavier, and so more powerful gun. The side-paddling punt is, though, faster, and in safe waters will act best, especially at night, as it can be held against wind or tide to listen for birds calling, and yet kept stem on in the direction they are, or you wish to go. This cannot be done so well when lying down and sculling with an oar or pushing with a setting-pole. Though I consider side-paddling one of the *most* cramped and unpleasant attitudes a man can put himself into, and very trying to his arms and back, yet, like all other things, it is highly successful when used under the conditions that suit it.

But whatever a punt be, single or double, she can't be too light, consistent with strength. Lightness means quickness and success in every way. In the very fast craft I have afterwards described (page 469), I was able, with a small 65lb. gun, shooting 10 ozs. of shots, to *race* past other shooters, when setting to fowl together in calm water in the large harbour I was fowling in when I built her. But, on the other hand, the larger punts, using heavier guns, when they *did* get a

shot, brought to bag more birds than two shots gave me. They could also, especially the double punts with two men aboard, row across open waters I dared not venture on, and pull at all times farther, and the latter faster, to get to fowl pitched at a distance than I could.

If there had been fewer birds about, a more landlocked estuary, and single punts the rule, I could in a light craft such as this have beaten all. It must be borne in mind that the most successful shots at fowl are often made in the wildest weather, when the birds are huddled in the channels. In a very small punt it is never safe to cross, unattended,

STERN OF FOWLING-PUNT,

With sides removed, showing position of hole or loop for towing as well as mooring. Total length, 1ft. 6in. to 1ft. 8in. Length on face before cut down to take centre after-deck plank, 4½in. to 5in.

wide unsheltered waters to reach such shots; and furthermore, when the channels are merged into one broad extent of sea by the rising tide, making shore in a tiny craft is not always pleasant or even safe.

Invariably tow a punt by a hole or loop placed halfway down the stern. This will lift her in a sea, and keep water outside.

Dry seasoned yellow pine is the lightest and most

suitable wood that can be used in a punt, provided it be kept carefully *painted*; if not well coated, it soon gets heavy from water soakage. Fir is also tough, and is capital stuff to use for decks, or even sides, if it can be procured perfectly sound, but as a floor-plank it rags and frays in a short time. The smallest and lightest of all these crafts (*see* foot of page 469), after several years' careful work, is as good as ever. The fowler I gave her to says she is tight as a bottle, and he is now using a 16oz. charge and 80lb. gun in her.

The deck of this craft at first consisted of longitudinal strips $\frac{1}{4}$ in. thick, 1in. wide, and 2in. apart, placed from the stem across the deck-rafters to the stern, and covered with duck, save a little sheet copper just under the flash of the muzzle. This punt had not the usual ribbons fastened over the joints of the bottom planks, but tarred canvas instead. Yet with all her lightness she *now*, after eight years' *service*, stands the recoil of a heavier gun and charge than I built her for. So much for a *very* light punt being unable to carry a big gun safely, without any aid to check recoil but the ordinary rope-breeching, such as long stocks under the shooter's arm, assistant springs, and what not besides. As to a light punt breaking her back, or bending, so she would, or a racing boat either for that matter, if improperly placed on a cart or rock. But in the *water* such an accident would never happen, and for the water is she intended, and *when* on land careful management. Though she will answer for a skilful fowler to kill birds in, I do not pretend she would do for a "bargee" to pull to

pieces, or carry coals across a river, as I saw a punt used for at Southampton the other day.

To make a punt up to more weight, always add *length* to her in preference to *breadth*. Breadth will make her slower and less sea-kind; length will make no difference as to size in her appearance to fowl, and she will be easier managed by her crew than if of wider beam.

Wood for floor of all ordinary duck-punts, yellow pine. Oak is far too heavy. It splits, is most difficult to work, and warps most of all when in the form of a *thin* plank it is subjected to heat or cold.

Sides.—These, in a small punt, if it can be obtained sound, should be of elm; in the larger, yellow pine.

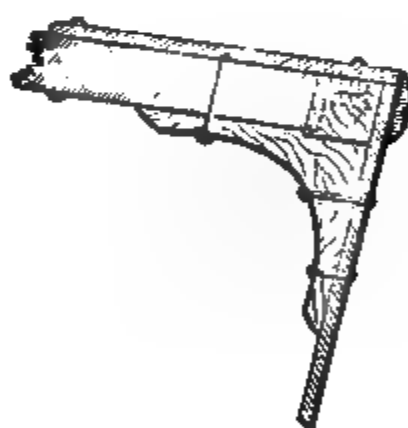
Decks.—In small punts fir, as it can be cut wide enough for them, and it does not soak; in the larger crafts, where more strength is required, yellow pine.

Floor-timbers.—Elm or oak, as directed. These should be cut out of grown wood with a curve of one inch, if $\frac{7}{8}$ ths is required. They will lose a little of this, and when all are fixed their united strength will give the floor a kammel of $\frac{7}{8}$ ths. As to *knees*, elm in the larger crafts (Irish elm is tough as steel); oak in the smaller, as, when cut *thin*, it is stronger than elm, and not then too heavy. All knees to be well chosen from carefully grown angles. A pair of knees to each other floor-timber, and fastened to the latter as well as to the sides and floor. Then all will spring together. The legs of these knees should meet in the centre of the floor, and limpet holes must be cut at their

angles as well as between the ends of the floor-timbers and the pine floor-strip to allow passage of water aft for bailing (*see sketch*).

SECTION OF FLOOR-EDGE OF FOWLING-PUNT, WITH SIDE-KNEE
AND FLOOR-TIMBER.

Fore and aft *Deck-rafters* may be of elm or willow, and stepped into side-top strip at their ends,

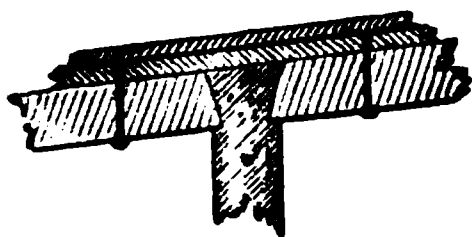


HOW TO SECURE ENDS OF FORE AND AFT DECK-RAFTERS, AS WELL
AS OF GUNBEAM.
(Side view.)

and propped as well by little knees underneath nailed to the sides (*see sketches*).

Gunbeam.—Pine in small punts, elm in the

larger. This beam should be always 3in. wide and $1\frac{1}{2}$ in. thick. Another beam, 2in. wide and 1in. thick, should support forward end of after-deck.



SURFACE VIEW OF DECK-RAFTER.

Coaming.—A piece of birch is very good in a small punt, yellow pine or ash in a large one. Let the forward ends of this coaming be supported outside by neat copper or brass $\frac{1}{4}$ -in. thick angles; wood knees being heavy, cast shadows and throw spray aboard. Posts take up room between the fore ends of the coaming. With knees or angles *outside* you have plenty of space to turn the big gun about, and to see the fowl at either side of the barrel without raising your head (*see* page 424).

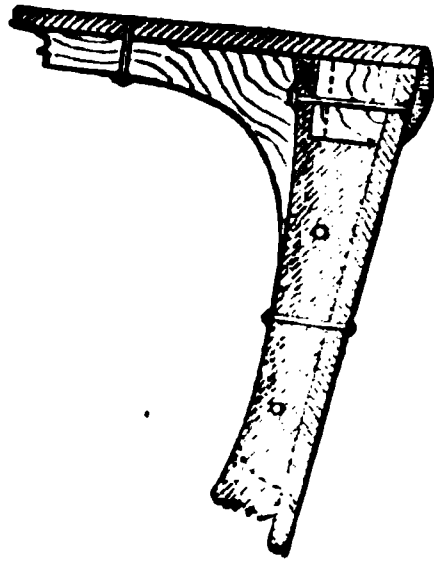
Stem and Stern.—Elm, birch, or *best* oak (there are two or three qualities of the latter wood).

Strips on edges of floor to fasten sides to should be of $1\frac{1}{2}$ in. square yellow pine, and run the entire length of the floor.

Strips on inside edges of sides at top, to support rafters, and nail edges of deck to, may be $1\frac{1}{4}$ in. square yellow pine, and also reach from stem to stern.

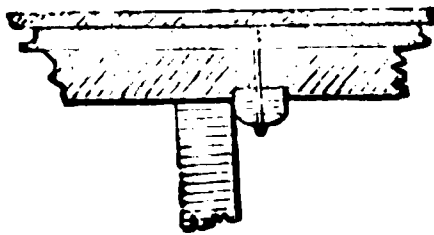
There must also be side-deck supporting knees fastened to the sides, and to the other knees as well, under the side-decks: their ends may project towards the centre of the punt beyond the decks just enough to fit the coaming down over

them (*see* midship section of double punt, Plate 14, page 471). Thick red lead should *without fail* be put between every place or joint where wood touches wood, all through from beginning to end, and the very best varnish put over the coats of red



HOW TO FIX SIDE-DECK AND SIDE-KNEES.

Showing how latter are stepped and slightly sunk in top-edge strip.
(Side view.)



SURFACE VIEW OF DECK AND SIDE-KNEE.

lead inside punt. Instead of paint, a lasting mixture for inside such a boat is: "Two coats of vermilion, $2\frac{1}{2}$ lbs.; carriage varnish, 1 pint; raw linseed-oil, $\frac{1}{2}$ pint; spirits of turpentine, $2\frac{1}{2}$ ozs."

Order of Building.—The three bottom planks chosen and planed, laid tight alongside, and the floor shaped out by means of long inch-square level strips meeting at the centre of each end of floor. The points then cut off square and left $2\frac{1}{2}$ to 3 in. wide to take stem and stern. Ribbons of 2 in. broad,

$\frac{1}{2}$ in. thick, nailed over joints of floor boards. Floor-timbers, with proper curve to give kammel, fastened to floor above the ribbons, and sunk over them, and one twice the width of the others fastened down under where gunbeam will end the fore-deck, to take the crutch that supports weight of gun. Spring fore and aft given by props under ends, and stem and stern blocks shaped (*see* pages 450, 457) and

HOW TO FIX GUNBEAM.

Ends to be propped with a small knee underneath, as are the deck-rafters (*see* page 460).

fixed. Strips nailed down from stem to stern on edges of floor (mind the nails are put as near the *inside* edge of each strip as possible, or they will come in the way when bevelling for the sides). To assist this sloping, which must next be done, they may project a quarter of an inch. Sides nailed on (as planks) and screwed to edge of floor-planks, to stem and stern, and riveted to strips. When so fixed, cut to proper height, found by running a level strip joining top of stem to top of stern in a straight line, and then fix on the square strips that run along their inside top edge from stem to stern side-knees fitted (pages 446 and 460). Gunbeam and rafters to be stepped into the strip running along, and riveted to inside top of sides, and

which, with the one below, butts into stem and stern (*see* pages 451, 460, 463). Decks laid on and screwed down to gunbeam, rafters, stem and stern, and side-top strip. Next fix small knees under side-decks (*see* page 462). Decks should be in four pieces, as marked on plan of double punt by dotted lines (*see* Plate 14, page 471).

Coaming.—Fore ends stepped down on gunbeam, after ends same way on after-beam that supports forward end of after-deck, and supported with metal knees here and there. It is also screwed all along to the edges of the side-decks, and propped by the ends of the side-deck knees. The open space between aft ends of coaming to be filled up by rail of same height (as before described), then the openings for paddling or sculling through may be cut (page 466).

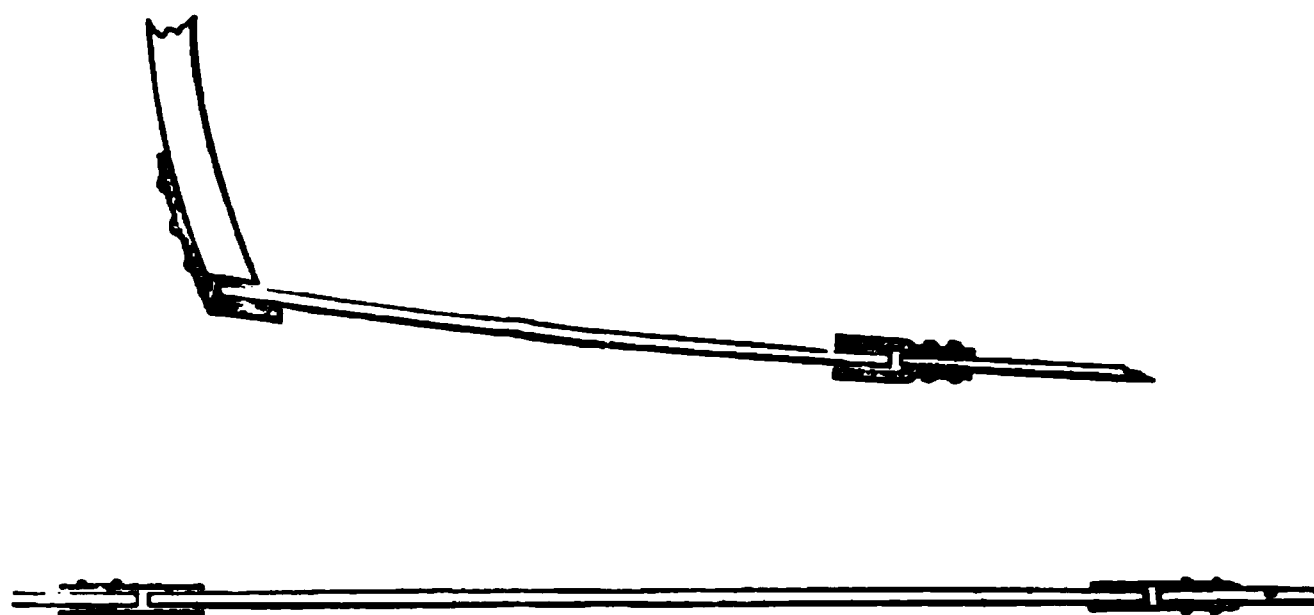
Coats of Paint.—Two of red lead on floor, inside and out (black varnish is heavy, and weeds and gravel will at times stick to it); two coats under decks, two on sides (inside, red lead; outside, dull white); one of white on decks. This allowed to dry, then another, and the shrunk linen stuck down on it at once, and smoothed out. Two thick coats outside linen, or perhaps three thin ones well brushed in. Linen to be drawn over joint of deck and sides, and there glued, to keep it for the time level and close to the edge till it is well tacked on and covered by oak-fender strip along gunwale $\frac{3}{4}$ in. by $\frac{1}{2}$ in. thick.

Oar-spur fastenings, hole in stem for breeching, towing loop, anchor cleat, mast fittings, gun-crutch fittings, cutwater coppered, or oak strips as de-

scribed, caulking, and general overhaul should now be done, as well as fixing $\frac{1}{2}$ in. thick elm wash-boards by brass hinges to the deck fore and aft.

All punts, the light ones especially, require fir *ceiling boards*, to protect the planking. They can be of $\frac{1}{2}$ in. fir (pine swells). They may be either in planks or, what is neater and lighter, be formed of strips 2in. broad and an inch apart, held together by transverse bars nailed to them underneath, these latter resting on the punt's floor between the timbers. In the section of punt these ceiling boards are not shown, in order that the sketch may be plainer. They should fit nicely and easily on the floor under the cockpit from side to side, and reach its length. They *may* also be put under fore and after deck (before these are fixed) to prevent oars and poles damaging floor-timbers and jamming. But with care they are not here required, and add weight to the craft; and the less of *that* the better, and the more successful will she be afloat in every way. *All* fastenings in a punt to be copper and brass, the nails carefully riveted, *not* clinched; clinching does not answer in thin soft wood, as the beaten-down points will drag through. Never put a screw in without a dip into oil, or a nail save with a properly fitting (a little tight) piercer to prepare the way for it. For paddling, setting, and sculling in a double punt, you want movable shutters in the after end of the coaming on either side 2ft. 8in. long. These may hinge down, as in plans, or take out, as shown on next page, and drop down into slots when not in use; they then form again a continuation of the

fixed coaming. This last is the best and simplest method. In a side-paddling punt the openings should be cut for the fowler's arms just where he reaches over the gunwale to paddle when lying down to his gun, and slides to drop in them at other times. In a sculling single punt one opening only is required in the after end of the starboard coaming (*see* Plate 13, page 467, for both).



MOVABLE SHUTTERS IN COAMING.

To lift out for paddling or sculling in double and single fowling-punts. Their ends drop between stout sheet copper strips, well secured, of the same height as the coaming, and projecting about an inch, as above.

Our little* gunboat should now be ready to launch and receive her big gun on board. May she have luck against the army of wildfowl, whether under the wintry moon or the cold blue sky of a frosty day in December!

* So small can a fowling-punt, that is side-paddled, be built, that for a forty to fifty pound gun she need not exceed 14ft. 6in. over all; 13ft. 7in. on floor; beam across gunwale, 2ft. 9in.; on floor, 2ft. 4in.; height of stem, 5½in., of stern, 8½in. A short craft like this is very handy in narrow channels, but from her greater freeboard looms large to the fowl in comparison to a longer, and therefore a lower one.

7

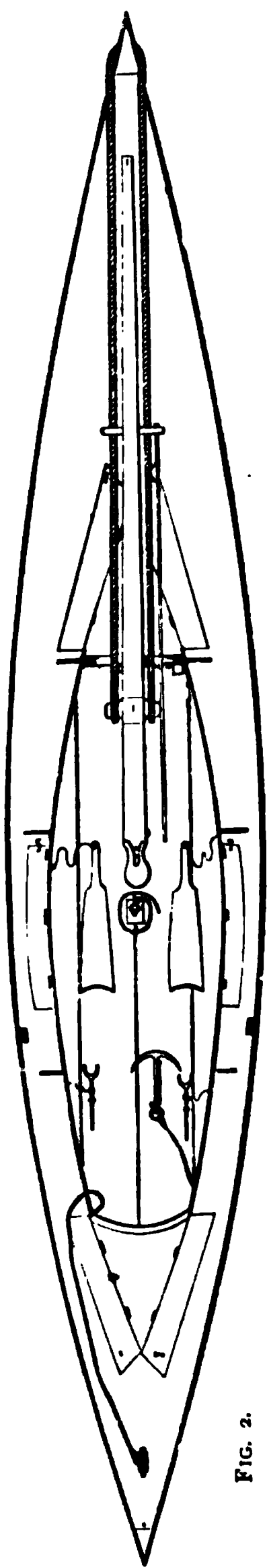


FIG. 2.

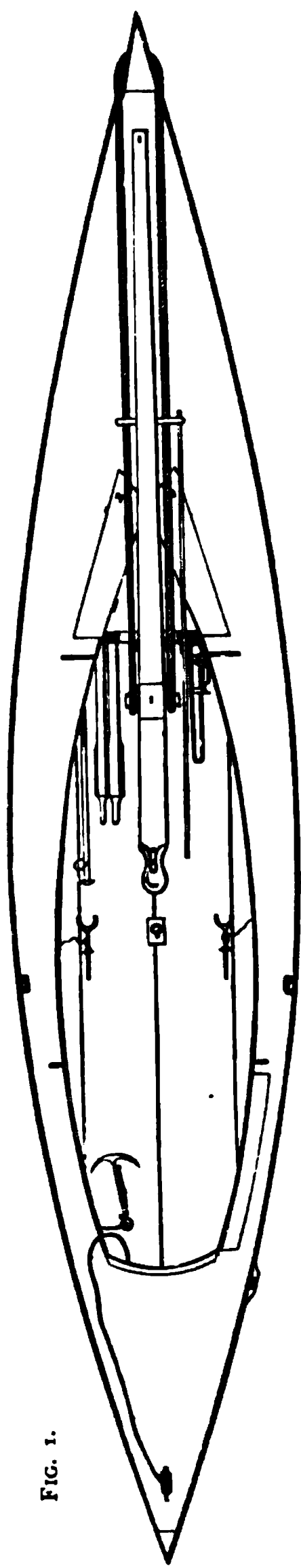


FIG. 1.

PLATE 13.]

SINGLE HANDED FOWLING PUNTS.

Scale $\frac{1}{2}$ inch to the foot.

[P. 467.

DIMENSIONS AND DIRECTIONS IN THE USE OF FOWLING-PUNTS. (See opposite Plate, Fig. 1.)

Single-handed punt for *sculling* to fowl, to take a gun of 80lbs. to 120lbs. weight, and a man of about 12 stone.*

Length over all	18ft.
Length on floor	17ft. 3in.
Greatest width of floor	2ft. 9in.
Greatest width at gunwale	3ft. 4in.
Height of stem	5½in.
Height of stern	8in.
Length of fore-deck	7ft. 3in.
Length of after-deck	3ft. 6in.
Greatest width of cockpit	2ft. 2in.
Width of side-decks at half-length of cockpit, each	6½in.
Each side flared out at most	3½in.
Round of deck at gunbeam.	3in.
Coaming forward, 3in. high, aft. 2½in., and ¾in. thick.	
Spring on floor, fore and aft	2½in.
Kammel or round athwart-ships.	¾in.
Floor-timbers 14in. apart, and a pair of elm knees (¾in. to ¾in. thick) to each alternate one.	
Floor-timbers of elm, 1½in. wide on surface by ¾in. deep.	
3 aft and 5 fore-deck rafters, ¾in. on surface by 1½in. deep.	
Floor-planks, ¾in. yellow pine.	
Sides, a full ½in. yellow pine.	
Decks, ¾in. yellow pine.	

For a gun of not more than 70lbs. to 80lbs. this punt may then be built 17ft. 6in. over all, 16ft. 9in. on floor. Width of floor at widest, 2ft. 8in.; of deck, 3ft. 2in.; height of stem, 5in.; of stern, 7½in.; length of fore-deck, 7ft.; of after-deck, 3ft.; round of gunbeam, 3in.; coaming forward, 3½in.

* For a gun of not more than 100lbs. this craft may be 2ft. 8in. on floor, 3ft. 2in. at gunwale; all else the same as above.

high ; aft, $2\frac{1}{2}$ in. ; floor-planks, $\frac{1}{2}$ in. ; sides, a small $\frac{1}{2}$ in. ; decks, $\frac{3}{8}$ in., all yellow pine.

When setting to fowl in this style of craft (*see* fig. 1, Plate 13) the shooter lies partly on his left side, and with his right hand sculls an oar in the after starboard spur, through the opening in the coaming, that hinges down flat or lifts out (*see* "Will they Wait?" Plate 4, page 54 ; and also position of sculler in Plate 9, page 331). In shallows he shoves along with a setting-pole. When in shot he can lay his oar or pole down by bringing the handle inboard, whilst he directs and fires the gun, using both hands to do so. He can also continue sculling till the instant of pulling the trigger-string, which he does with the left hand when in shot ; at other times he may pull the punt stem or stern first, or sit on the after-deck on a rowing cushion, and cruise leisurely about with a long single paddle (*see* page 433), till he sees fowl and lies down to approach them, as described above.

DIMENSIONS AND DIRECTIONS IN THE USE OF
FOWLING-PUNTS. (See Plate 13, Page 467,
Fig. 2.)

Single-handed punt for *paddling* to fowl, to take
a gun of 80lbs. to 112lbs. weight, and a man of
about 12 stone.*

Length over all	18ft. 2in.
Length on floor	17ft. 3in.
Greatest width of floor	2ft. 8in.
Greatest width at gunwale	3ft.
Height of stem	5in.
Height of stern	7½in.
Length of fore-deck	7ft. 6in.
Length of after-deck	4ft.
Greatest width of cockpit	2ft.
Width of side-decks opposite openings for paddling, each .	6in.
Each side flared out at most	2in.
Round of deck at gunbeam	3in.
Coaming, forward, 2½in. high ; aft, 2½in. ; thick, ¾in.	
Spring on floor, fore and aft	2in.
Kammel, or round athwart-ships	¾in.
Floor-timbers 1ft. apart, and a pair of oak knees (½in. to ¾in. thick) to each alternate one.	
Floor-timbers of elm, 1in. wide on surface, ¾in. deep.	
4 after and 6 fore-deck rafters, 1in. on surface by 1¼in. deep.	
Floor-planks, ½in. yellow pine.	
Sides, a small ½in. yellow pine ; if of elm, ¾in.	
Decks, ¾in. yellow pine or fir.	

If a *very fast* punt of this class is required for a
place where there is much competition, a sheltered
harbour, and the birds few and wild, and tides strong,
for a light man and 60lb. to 80lb. gun, she may
be built 17ft. 5in. over all, 16ft. 8in. on floor. Floor,
at widest, 2ft. 6in. ; at gunwale, 2ft. 10in. ; height
of stem, 4½in. ; of stern, 7in. ; round of gunbeam,

* For a gun of not more than 85lbs. this craft may be built,—over
all, 17ft. ; on floor, 16ft. 3in. ; all else the same as above.

2 $\frac{3}{4}$ in. ; coaming, forward, 3in. high ; aft, 2 $\frac{1}{2}$ in. ; floor-timbers, of oak, 10in. apart, $\frac{3}{4}$ in. square, a pair of knees to each other one $\frac{1}{2}$ in. thick, of oak ; deck-rafters, $\frac{3}{4}$ in. square ; decks, $\frac{1}{4}$ in. thick, yellow pine ; floor-planks, $\frac{1}{2}$ in. pine, or of $\frac{3}{8}$ in. elm ; sides, $\frac{3}{8}$ in. yellow pine or elm.

When setting to fowl in this craft (Plate 13, page 467, fig. 2) the shooter lies face downwards, his chest supported by the rowing cushion, or a smaller one made for the purpose. He reaches his arms through the parts of the coaming that fold down or lift out for the purpose, and works the punt along with the small paddles (shown inside punt in plan and at page 432), which, keeping under water, he feathers forward after each stroke (*see* Plate 12, page 358). In shallows he pushes with them edgeways, like sticks, if the ground be hard ; if soft, uses them as in deep water. Within shot, and about to fire, he drops the paddles, which are secured to the gunwale by cords, or lays them on the side-decks. He can, if fowl are tame, leave go of one paddle, and move nearer in shot, or guide the punt with the other, one hand being then at liberty to fire the gun in a moment, or shift its elevation if necessary as he draws in shot. At other times, the shooter may pull his craft stern first, or also, with his pair of sculls, push her stem first, as he kneels on the floor, till he sees fowl, and lies down to approach them with his small paddles, as above described. When moving cautiously along shore or channels in search of birds, he can ply a long single or double paddle (*see* pages 432 and 433) as he sits on the after-deck.

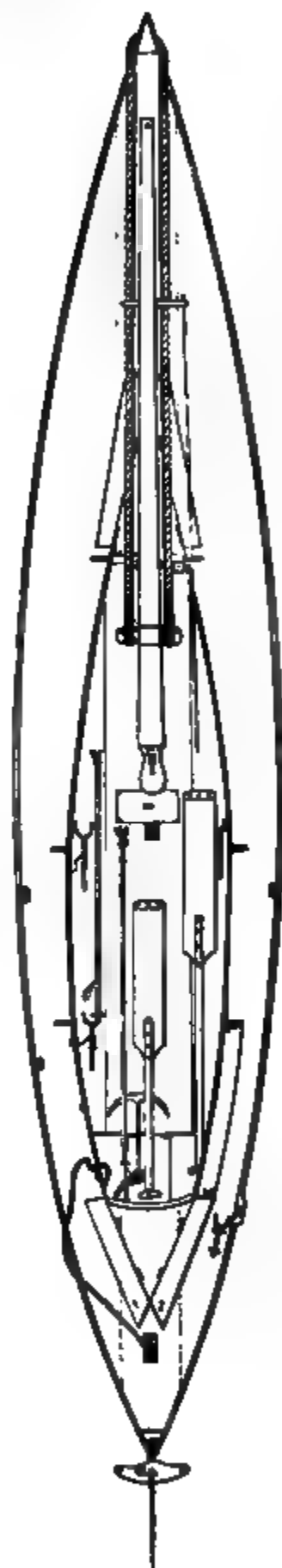


PLATE 14.]

DOUBLE HANDED FOWLING PUNT.

Scale, Length plans $\frac{1}{4}$ inch to the foot. Midship section $\frac{1}{8}$ inch to the foot.

[P 471.

DIMENSIONS AND DIRECTIONS IN THE USE OF FOWLING-PUNTS. (See opposite Plate.*)

Double-handed punt for *paddling, sculling*, or using a *set-pole* up to fowl, to take a gun of 130lbs. to 170lbs. weight, and two men of about 12 stone apiece. For a gun not exceeding 130lbs. this craft may be built 9in. shorter on floor and overhead, both 4in. narrower; all else the same as given below.

Length over all	22ft. 5in.
Length on floor	22ft.
Greatest width of floor (that is amidships in a double punt)	3ft. 2in.
Greatest width at gunwale	3ft. 11in.†
Height of stem	5½in.
Height of stern	8in.
Length of fore-deck	8ft. 3in.
Length of after-deck	4ft. 2in.
Greatest width of cockpit	2ft. 6in.
Width of side-decks, at half-length of cockpit, each	9in.
Each side flared out at most	4½in.
Round of deck at gunbeam	3½in.
Coaming, forward, 3½in. high; aft, 2½ft.; thick, ½in.	
Spring on floor, fore and aft	2½in.
Kammel, or round athwart-ships	7in.
Floor-timbers 14in. apart, and a pair of elm knees (¾in. to 7⁄8in. thick) to each alternate one.	
Floor-timbers of elm, 1½in. wide on surface by 1in. deep.	
3 after and 5 fore-deck rafters, 1in. on surface by 1½in. deep.	
Floor-planks, ¾in. yellow pine.	
Sides, ¾in. yellow pine.	
Decks, 7⁄8in. yellow pine.	

A small double punt that can be sculled or poled to fowl by one man, or will take two light men and a gun of 80lbs. to 100lbs., may be built,—over all, 21ft.; on floor, 20ft. 5in.; floor, at widest, 3ft.; at

* The rest-handle in this plan (Plate 14) is shown resting *on* instead of *between* fore ends of coaming (as it should be) in order to be the more plain.

† For a gun of 150lbs., 3ft. 8in.; floor, 3ft.; all else as above.

gunwale, 3ft. 6in. ; height of stem, 6in. ; of stern, $7\frac{1}{2}$ in. ; length of fore-deck, 7ft. 6in. ; after-deck, 3ft. 3in. ; round of gunbeam, 3in. ; height of coaming, forward, $3\frac{1}{2}$ in. ; aft, $2\frac{1}{2}$ in. ; spring on floor, 2in. ; kammel, $\frac{3}{4}$ in. ; floor-timbers, of oak, $\frac{3}{4}$ in. square, and 1ft. apart, a pair of knees to each alternate one, $\frac{5}{8}$ in. to $\frac{3}{4}$ in. thick ; floor-planks, $\frac{5}{8}$ in. ; sides, $\frac{1}{2}$ in. ; decks, $\frac{3}{8}$ in., all yellow pine.

Large double punt, such as I use for my 180lb. gun : Over all, 22ft. 7in. ; on floor, 22ft. ; floor, at widest, 3ft. 4in. ; at gunwale, 4ft. ; height of stem, 6in. ; of stern, $8\frac{1}{2}$ in. ; round of gunbeam, 4in. ; spring, fore and aft, $2\frac{3}{4}$ in. ; kammel, 1in. ; floor-planks, $\frac{3}{4}$ in. ; sides, $\frac{3}{4}$ in. ; deck, $\frac{1}{2}$ in., all yellow pine.

When setting to fowl in a double punt, the gunner lies face downwards, just clear of the gun, but well up to it, so that he can place his left hand on the short stock to depress it, and so elevate the muzzle for a flying shot, or instantly direct it to right or left as required. With his right hand he can then pull the trigger-string, or shift the gun-rest, should it be necessary to do so, to alter the elevation. The second man (the puntsman) either lies on his left side, his feet and legs well under the after-deck, and sculls an oar in the after star-board spur, through the portion of the coaming that hinges down or takes out (*see* Plate 9, page 331), else, if the water be shallow, pushes with a setting-pole (*see* opposite Plate, fig. 2; as well as "A Shot on the Ebb," page 42).

The best method is for him to lie down, face upwards, with his head against the rail of after-deck (which should be padded), and work the shorter of the two paddles shown in plan of double punt

The figures are here shown somewhat higher than correct, in order to give positions plainly.

(page 471), through the openings to his right or left hand (*see* fig. 1, Plate 15, page 472) as the wind or tide require. He can close one opening by its movable shutter, and paddle through the other.

The paddle-blade should be worked entirely under water, and feathered forward, without the least splash or rippling noise after every stroke.

If the puntsman meets a shallow, he can, without altering his position, push with the paddle, and, after a little practice, he will be able to direct and turn the punt *to an inch* to suit the gunner, who will not then require a rudder.

A double punt by this last method can, under all conditions of wind and water, be urged forward to fowl with more control, speed, and silence than if sculled with an oar, or even when pushed with a set-pole.

At other times the punt can be rowed by one man with sculls, or pulled by two, stem or stern first as thought best; and one man can send her quietly along with the large paddle, both fowlers on the look-out for birds meanwhile, or hurry her up to cripples, as he sits on the after-deck. (*See* position of puntsman in Frontispiece.)*

* These terribly tedious dimensions and directions pertaining to wildfowl punts are at last completed. I have not been near as concise as I at first intended, but hope I have made matters plainer thereby. It must be remembered that few fowlers agree on the subject of punts, the sole reason of this dissension being that the crafts suitable in one estuary are not so in another. For example, the owners of the 18ft. long, 2ft. wide racers of Norfolk and Lincoln would laugh at the broad, short, 15ft. tubs of Poole, in Dorset. Equally the men of Essex, Kent, and Suffolk deride the double punts of Holland, Ireland, and even those of the Solent. But one and all kill fowl, each to his own; and *that* is the main point!

GONDOLA. (*See opposite Plate.*)

Length over all	23ft. 3in.
Length on floor	22ft.
Width of floor at widest	2ft. 10½in.
Width of gunwale at widest	4ft. 9in.
Breadth of stern	2ft. 4in.
Height of sides (vertical) amidships	1ft. 8in.
„ of bow do.	2ft. ½in.
„ of stern do.	1ft. 11in.
Spring, fore and aft, on floor	4½ in.
Kammel, or round athwart-ships	7in.
Substance of floor-planks	1in.
„ of side do.	1in.
Thickness of knees or bent ribs	1½in.
8 floor-timbers, 2ft. 4in. apart	3in. wide by 1½in. thick.
Width of seats	7½in.
Seats apart from centre to centre	3ft. 2in.

After-edge of No. 2 seat to be 8in. forward of midship section.

Beam halfway between midship section and stern to be 4in. wider than halfway between midship section and bow.

If endless ribs are used they should be of steamed American elm, with elm strip round edge of floor (page 475).

This craft may also be built 17½ft. over all; 16ft. on floor; floor 2ft. 8½in. wide; at gunwale 4ft., so as to take one, or at most two men, and sharp at both ends. She can then be shoved in any direction when in narrow places. She can be used for stealing about the channels with a heavy shoulder-gun, or, if of the larger size given above, for general purposes, such as fishing, shooting, netting, oyster-dredging, and as a means of transit on a large shallow estuary. She should be a dull grey outside and red inside. The short deck forward will keep

MIDSHIP SECTION.



SHEER PLAN.



BREADTH PLAN.

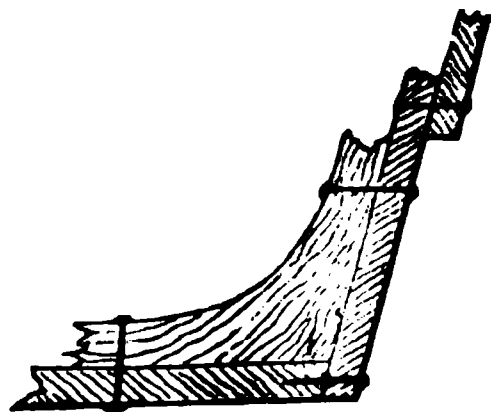
PLATE 16.]

GONDOLA.

[P. 474

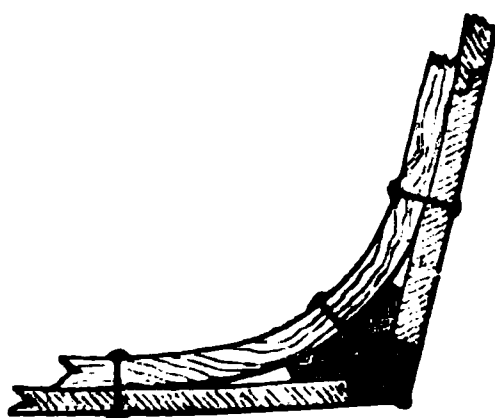
Scale, Length plans $\frac{1}{4}$ inch to the foot. Midship section $\frac{3}{8}$ inch to the foot.

coats or ammunition dry. The fishermen's gondolas are built with their sides plainly screwed to the edges of floor, with knees not even cut to the grain and carvel-sided, of spruce or other cheap



PLAIN KNEE FOR GONDOLA.

wood. They can't afford pine. Yet their gondolas stand seven or eight years' constant rough work, winter and summer. The above is the cheapest and lightest method of building such a craft, but endless ribs, cant piece round edge of floor, clinker-

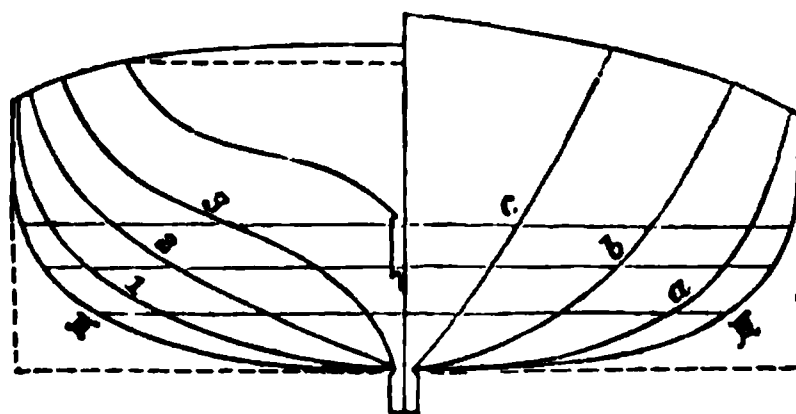


CANT PIECE AND BENT KNEE FOR GONDOLA.

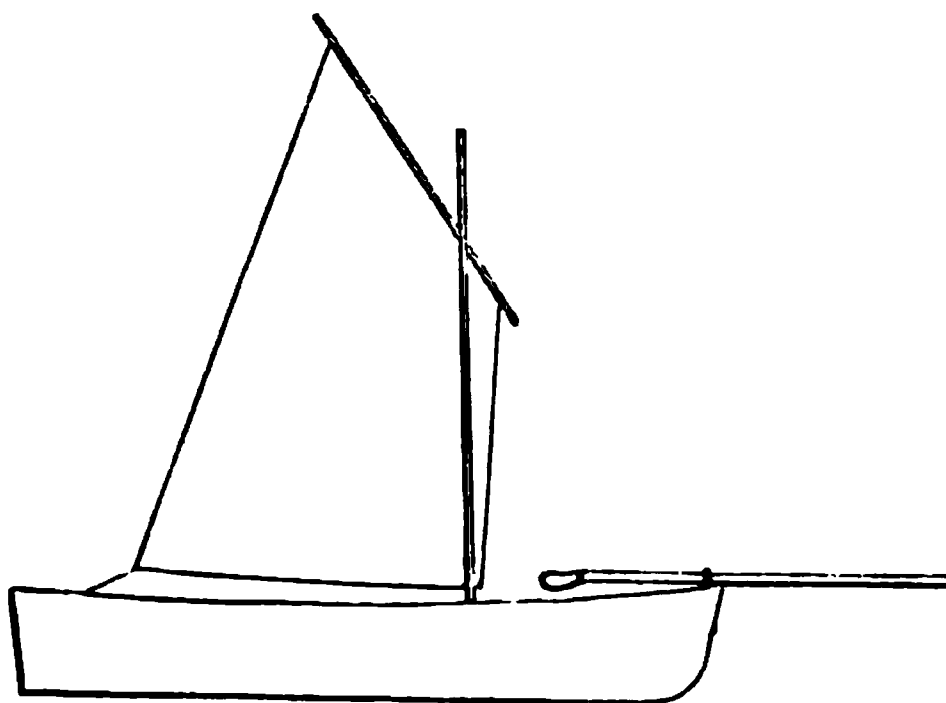
built sides and yellow-pine planking is a great improvement in many ways. A long paddle is useful aboard a gondola—in a large one to steer her when sailing, in a small one to push her about with.

N.B.—In sheer plan of gondola, enough spring fore and aft in floor is scarce shown, but see measurements for that above. Also note that, if building, breadth of floor should be taken from “midship section,” as in plan of gondola (Plate 16) she is built with a “cant piece,” and the *real* width of floor might be miscalculated.

LIGHT-DRAUGHT BOAT FOR SAILING ON FOWL AT SEA, AND GENERAL PURPOSES IN SHALLOW WATERS. (See opposite Plate.)



MIDSHIP SECTION OF BOAT. $\frac{1}{4}$ in. to the foot.



SAIL-PLAN OF BOAT. $\frac{1}{4}$ in. to the foot.

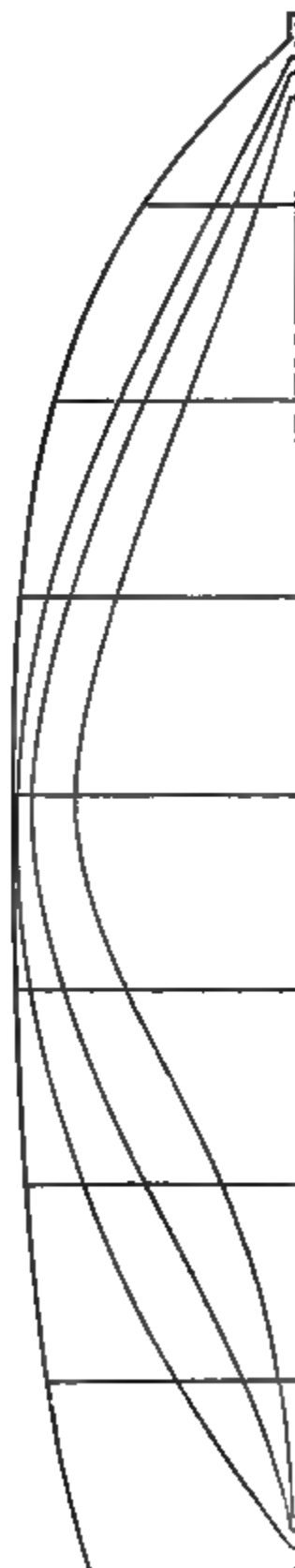


PLATE 17] SHEER DRAUGHT OF BOAT FOR SAILING ON FOWL AT SEA, OR IN SHALLOW WATERS WITH [P. 476.
A SWIVEL GUN, AND FOR TENDING ON PUNT OR YACHT AS WELL.

Scale, $\frac{1}{2}$ inch to the foot. Dimensions, Length 15 feet } Material Wych Elm,
Breadth 5 feet 6 inches } worked full $\frac{1}{2}$ inch thick.
Depth 1 foot 11 inches }

RECOIL SPRING FITTED TO SHORT FORE-DECK IN BOW OF BOAT.

(Side view.)

Breadth of plate on deck, $2\frac{1}{2}$ in. ; thickness, $\frac{1}{8}$ in. Its fore end, which is slightly wider, fits over stem head. The under plate is separate from the overhead one.

CHAPTER XXIV.

Shot—Cartridge-making for Big Guns—Cleaning and Preserving Guns—Weather-warnings, &c.—The Wildfowl Act.

SHOT-MAKERS all differ in their lettering and numbers to the ounce, and there is no standard to go by or compare with.

London 5 is the same as Newcastle 6. Gunners, if they investigated, would often find they were using in their guns quite a different size of shot to what they imagined.

Hardened shot and chilled shot are identical. The term cold blast is also applied to this kind of shot in the north of England, and it consists of an alloy of lead and antimony with a small proportion of arsenic, which is compulsory in the process of manufacture. The antimony is the hardening element, and the approximate proportions are—

Lead, 94 per cent.

Antimony, 5 per cent.

Arsenic, from $\frac{1}{2}$ to 1 per cent.

Patent or soft shot is simply made from pure lead, with about a $\frac{1}{2}$ per cent. of arsenic.

Some of the smaller numbers are, however,

slightly increased in hardness by the addition of 1 per cent. of antimony. But this small quantity makes no difference in the specific gravity. In the hard shot this is, though, apparent if the pellets per ounce are counted "hard" *versus* "soft." As Messrs. Walker, Parker and Co. are, perhaps, the most reliable of shot-makers, I annex their London and Newcastle sizes of patent shot, and have compared those of other makers as well. As said, London sizes contain from twenty to even forty more pellets to the ounce than do those of Newcastle, London No. 6 having 272 pellets, and Newcastle No. 6 but 248 : * in the other numbers there is not, excepting No. 5, much divergence. London No. 6 is, without doubt, the best size for ordinary game-shooting at fair ranges. Gunmakers are supposed to know all about these differences, yet when a shooter orders BB, SSG, or No. 1 to No. 6, they send what *they* consider suitable, though their customers may imagine that BB or No. 6 are the same as to size all the world over.

REMARKS ON HARD AND SOFT SHOT.

The use of hard or chilled shot appears to be the fashion with many sportsmen, but no *real* advantage can be claimed for it over soft or patent shot. The use of hard shot, gunmakers assert, is the reason of the greatly increased wear and tear of barrels now-a-days to what was the case before its introduction. In a choked barrel "hard" will wear the interior at the narrowest part far more than soft shot does on passing through it—in fact, take away the "choke,"

* MESSRS. WALKER'S LONDON SIZES.—PATENT SHOT.

No.	1	2	3	4	5	6	7
Pellets to the oz.	79	96	119	173	248	272	345

though the shooter may not find this out ; for if the shot does not give to the barrel, the latter *must*, sooner or later, give to the shot. Of course, chilled shot has its champions, who say, "True, hard shot, being lighter, carries less momentum ; but then it retains its globular form better, and its more perfect shape on striking enables it to penetrate bird or animal deeper than does soft. Also, this retention of spherical form, even when it is fired from a choked barrel, has the advantage of not presenting square or angular surfaces to the air to retard the speed of flight. Further, having more pellets to the ounce than soft shot, it makes a better pattern ;" and *this* strongly commends it to target-shooters and gunmakers. For my part, I will never again use hard shot in a valuable gun. That hard shot has greater penetration than soft, its effects on a paper-pad shows to be the case, the reason being it keeps its shape on contact.

But I am convinced that, pellet for pellet, it does not give so forcible a "shock" to game as does "soft," especially when a non-vital part is encountered, as the latter expands and causes a greater "shake," or more stunning blow, in consequence—a good quality that target practice overlooks. I have also found, on examining birds killed with "hard" and "soft" shot, that the former often glances off a very light bone without breaking it, and that in this respect it is inferior to its rival. I have purposely fired two thousand rounds at game with each kind to demonstrate the supposed superiority of "hard" over "soft" shot, using both "cylinder" and "choked" barrels. I could not discover that the one was better than the other in its performances. My method was to take out on alternate days bags of cartridges containing chilled shot and soft, one ounce and an eighth by weight to each case, all loaded precisely similar as to powder and wads : an equal number of each was fired and every cartridge was plainly marked beforehand as to its contents. The empty cases that had accounted for *dead* game I at once clipped on their edges, when extracted, with a small pair of nippers I made expressly ; any long and at the same time clean killed shots received two clips. These discharged cases I carefully kept, placing the ones marked "hard" apart from those marked "soft." At the termination of my experiment the "soft" shot was seventeen to the good, and five of the cases had received two clips.

In my opinion, as well as in that of several friends, who at my request have made similar trials, hard shot has no appreciable advantage over soft when used on *game*. But it has the *disadvantage*, though gunmakers won't consider it one, of wearing out a barrel, especially a "choke," in the proportion of quite three to two as against the old-fashioned sort, when pretty heavy firing is experienced. At all events, I have proved this to my own satisfaction rather too plainly to be pleasant for my pocket.

Messrs. Walker and Parker.	
No.	No. of Pellets to the Ounce.
7	328
6	248
5	204
4	147
3	101
2	82
1	70
A	60
AA	53
AAA	48
AAAA	37
SSSG	17
SSG	14

Game shooting.
 Cripple-stopping, after firing swivel-gun.
 Flight and shore-shooting with 12-bore gun.
 Heavy shoulder-gun ashore and afloat.
 Teal, as well as Wildfowl-shooting by night with a swivel-gun.
 Wildfowl-shooting with swivel-gun in early winter. This size is equivalent to B.
 Wildfowl - shooting with swivel - gun throughout winter after Nov. 15th. This size is equivalent to BB.
 Wigeon, Duck, and especially "Diving Duck," with swivel-gun, when very wild. This size is equivalent to BBB.
 Long shots with swivel-gun at Duck and Diving Duck when very wild.
 Swans, Brent, and other Geese, with swivel-gun.
 Ditto, ditto, if very wild.

No.	No. of Pellets to the Ounce.
1	92
5	228

Cox Brothers, of Derby. Patent Shot.

No.	No. of Pellets to the Ounce.
1	104
SSG	11

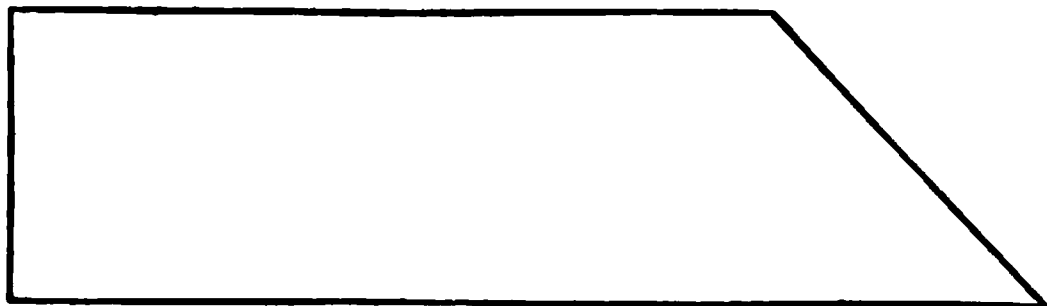
Newcastle Chilled Shot Company.

No.	No. of Pellets to the Ounce.	} Sheldon, Bush, and Co.
1	80	
5	206	
6	270	

Shot-makers still vie with each other in giving their shot a shining lustre by means of black lead, especially so with regard to the hard sort. This addition only fouls our guns twice as much as necessary, to nobody's benefit, save the dealer in black lead !

TO MAKE SHOT AND POWDER CARTRIDGES FOR SWIVEL-GUNS.

Shot.—Turn a roller of hard wood as a mould $\frac{1}{8}$ in. smaller than bore of gun ; cut not too stiff cartridge paper into this shape. Wrap it tightly



PAPER SHAPE.

round wooden mould, the point of the paper gummed down outside, and last to show. Three folds will be enough. Turn in one end by drawing the mould an inch or two up the paper funnel ; when turned in, stamp it down hard and flat at the base and seal it, as wax resists damp. Withdraw the mould and pour in proper measure of shot,

shaking it down close. Next turn in top of paper funnel. Now place on the cartridge, at one end, a hard rolled ball of oakum, to fit the gun or case as a wad. Tie soft strong sail-twine of white hemp (it will lie nice and flat) from under the base of the cartridge, as it stands upright on the table, over the oakum top, cross the string, lead it down the sides again in a different place, and knot at base. Have at hand some thin soft paper marked in print *Geese, Duck, Night, Day*, and so forth. Paste this one fold and a half round the cartridge from base to top, without overlapping its ends. This then keeps the fastenings from shifting. When the paste is dry, size first, then varnish over all, and you have a



SHOT CARTRIDGE.

cartridge that won't break when tossed about, or ball when fired. When the correct size and shape of paper is found, cut a piece of sheet tin to just match it. Then, by running a sharp knife round its edges as it lies on the paper, one cartridge will be exact with another.

Powder.—On same mould as used to form out of thin soft paper a funnel just same way as was prepared for the shot with only two folds round the wood, and throughout. After securing the base, measure of powder, close down open end with silk from top to base, three or fo

up and down in different positions. Next form a paper funnel, this time on a mould $\frac{1}{4}$ in. larger than the bore of gun, and with paper twice as stout as used for shot. Having turned in and sealed the base, drop the powder-cartridge into it and fasten all off as if for shot, of course leaving out the wad. When charging gun or case, cut the string of the outer covering, strip its paper off, and the powder is at hand in its thin cover. If the outer covering is well secured and varnished, the powder-case may be carried in a damp pocket all day (as I have tried) without harm to its contents. The cartridge can (being coarse the grain won't run out) be pricked, when loading, opposite the ignition ; but I never found it requisite to do so. For muzzle or breech-loading swivel-guns these cartridges are most useful, as no measures are needed at the time of charging, and the powder and shot can be kept in safety ready made up in an ammunition-box. As to taking a little time to make, why all such gunning necessities should be seen to at leisure, and *not* at the moment they are likely to be wanted.

ON CLEANING AND PRESERVING GUNS, LARGE AND SMALL.

There are a hundred receipts that might be given for this purpose, one nearly as good as another. I will shortly state what I have found to answer, especially with regard to *salt water*.

1st. To keep a gun clean when laid by and not daily inspected :—Cover barrels outside with an

equal mixture of best paraffine oil and refined neat's-foot. Stop up the barrels with corks or wads, and place inside each a quarter of a pint of same mixture, shaking it well over the interior.

Again:—Coat outside with mercurial ointment, well-strained goose-grease, or, best of all, vaseline; inside, draw a rag soaked in one of these mixtures by a string backwards and forwards a few times.*

To send guns home a long voyage by sea, with no one to look after their interests, take locks out, fittings off and barrels; put all these latter, with some wadding between them, in a tin box just to fit them, which fill with oil and solder up tight. The woodwork also oil well, sew up in cloth, and put all together in wooden case.

Gunlocks, whether in or out of use, must not be coated with a thick oil, which will only collect dirt and become sticky. Paraffine, when left wet on a gun and *exposed* to the air, evaporates rapidly when by *itself*—in fact, creates rust. On a lock, and protected from the atmosphere, it answers well, and with it a lock will always “speak” with that pleasant “snick” that tells it is in good working order. But better than paraffine for a lock is carefully refined neat's-foot. It takes some time to prepare, but almost enough for a lifetime can then be done.

The following receipt for doing this was given me by an old and experienced gunner:—

* The whole principle of keeping a gun clean merely consists shutting out the air, and consequently the damp. *Anything* that do this, by remaining on the metal without evaporation, will answer

Purified Neat's-foot Oil.—Procure half a pint of the best fresh neat's-foot oil, let it stand till all the thick has sunk to the bottom ; pour off only the clear or bright part into a bottle ; to this add a quarter of an ounce of powdered animal charcoal, shake up well and let it stand for twenty-four to thirty-six hours ; strain off into a bottle half-filled with bright lead shavings, place it in a light place, a sunny one if possible, when all the thick and fatty particles of the oil will sink and adhere to the bright lead. It is generally necessary to pour the oil carefully, avoiding all sediment, on to a second set of lead shavings. After that it may be transferred to small bottles for use, which keep well corked. The whole process will take some three weeks to complete.

To keep a gun in nice order when in constant use nothing is better, cheaper, or more simple than refined paraffine to take rust *off* or to use for every part of a gun, but it must be well rubbed from all exposed parts soon after putting on. On applying oil to the action and lock of a gun it cannot be put on too thin ; the working parts of the lock especially should be very lightly touched, and very seldom—twice a season, perhaps, at most.

When a gun is cleaned and will not be wanted for a week or so, put in each barrel a stick covered with thin flannel or baize wrapped round it several times, and then neatly stitched from loosening, till it fits the barrel fairly tight, the flannel to be slightly coated with neat's-foot or vaseline : a twist of either stick, if the gun is not used as soon as expected, will keep all in order inside. These rods

can be washed when necessary. To clean out gun-barrels quickly inside have a single rod, also covered with flannel; bind collars of string tightly round it an inch apart. This will cause little ridges to rise if the stick is thin and the covering thick. The stick may have a handle-knob at one end. Though the flannel get quite black from dirt and oil it will polish a gun well nevertheless, and can be washed when necessary.

If a gun is in a very bad state of rust, pour boiling water over the affected parts, and afterwards rub in and off paraffine. Paraffine will in time remove the browning from the barrels of a gun, it is true, but that will come off, sooner or later, whatever method of cleaning is resorted to, though perhaps not so soon as with paraffine.

To remove the bulk of the dirt in foul barrels, the scratch and wool brushes, screw-rods, etc., that gunmakers sell are of little use, as they don't fit the barrel *tight* enough to drive the accumulation quickly out; they merely smear it down flat and pass over it, so giving a great deal more trouble than necessary, and the amount of brass they are usually furnished with is detrimental to a barrel, save in most careful hands.

A keeper will find something to fit a barrel tight soon enough, as he knows the gun will else take a long time to clean. But how does he set to work? Nine cases out of ten he puts in a cloth, passes it half-way through the barrel with a sharp-pointed brass-ended rod, such as are sold in gunmakers' shops. This naturally very often jams, as it wedges into the cloth more and more. Then, why, it's a

case of a sound rap of the other end of the rod against a stone floor : through comes rod and cloth. The gun is polished, as the manipulator sees to his satisfaction when putting the barrel between the light and his eye. Some day the owner of the weapon is surprised to hear from his gunmaker that the barrels of his last new, or favourite old gun, are bulged.

I annex description of the best contrivance I ever used for cleaning out a gun-barrel ; the most clumsy-fisted attendant could not scratch or injure with it.



CLEANING R

Get a sound stra longer than the bar smaller in diameter t a hole at one end to up to its neck, leav outside the wood.

fit the bore of the gun at the breech end. Stamp out of $\frac{1}{8}$ in. thick soft leather a dozen or so wads. Out of their centre work little holes with the point of a penknife, just large enough to fit the neck of the screw. Cut some of the wads smaller than others after the holes are bored. Place a full-sized one and a small one alternately on the neck of the screw, and turn the screw in home; bind this end of the stick with waxed thread to strengthen against a split. The leather wads should be kept soaked in a wineglass or small bottle of thick oil, and may be changed on the stick about once a year, if much used.

A gunmaker could, no doubt, turn out something neater with brass ferule and washer, but it could not answer better.

At the other end of the stick, as shown in sketch, saw down a 3 in. slit with a stout saw, bore a hole through the stick previously at right angles to the cut. Keep at hand, strung on a piece of wire, some 6 in. square bits of flannel or baize. Dip one lightly in turpentine, and, after cleaning out the rough dirt with the other end of the rod, work this end through. The flannel should be folded across and put in the slit, and a scrap of cord firmly tied through the hole to keep it fast. The bits of flannel can be washed when required, and cleaner bits kept for the final polishing.*

* Do not push the rod right through *at first*, but place the muzzle ends of the barrels against a piece of soft wood or felt hung on the wall. Push the leather head up and down till all the dirt is collected at the end of each barrel, then push the rod through and finish off with the rag.

By this means the most valuable of guns cannot be damaged ; and a pet pair of Purdey's need not be taken up to one's bedroom, on returning from a day's shooting, and cleaned on the sly rather than trusted out of hand.

As to swivel-guns, it is a great trouble cleaning them at sea, and painting them white no doubt saves much labour, besides giving them a suitable appearance. Before painting, all grease must be got rid of by washing with lime and water, and when painted it will be necessary to fix a movable duck cover, a foot in length, to lace over the spot where the barrel comes in contact with crutch or bench, as, when a gun is painted, every little chip of the covering that flakes off becomes a nest for rust, which finally works its way in and eats a cavity at such a spot. However carefully a big gun is painted, the rust caused by salt air and water invariably works in between the paint and the barrel, which latter should be scraped bright and repainted every third year in consequence, or serious damage may ensue.

Browned punt-guns look quite black at a short distance. A polished surface is much the best for a large gun, both for its appearance with regard to its use and for ease in keeping clean, as it may then be rubbed and cleaned as required. Fifty years' of "elbow-grease" and emery cloth would not affect its strength, and, if knocked or scratched, rust is not caused as if it were painted or even browned.

Mr. Holland, of Bond Street, showed me a gun that he built for a customer many years ago. It

is nickel-plated, and, after long wear and exposure by land and sea in various climates, is as clean now as when first coated at the time it was made. A costly but most satisfactory method of treating a big gun outside, as to its colour and immunity from rust.

What will always be found handy for big or small guns is to carry in ammunition-box or gun-case a sponge, the size of a small apple, saturated with vaseline, and kept in a little noose-tied bag, just to fit it, made of duck. It will supply the requirements of a season's cleaning. Watch-oil is admirable to gently touch the working parts of all locks with inside.

Weather is such an all-important subject to the fowler of every kind and class, and its present and probable state to such men is of so great interest, that I make no apology for introducing Admiral Fitzroy's valuable table of barometer signs and warnings :—

THE BAROMETER RISES
for Northerly wind
(including from North-west, by the
North, to the Eastward),
for dry, or less wet weather,—for
less wind,—or for more than one
of these changes :—

Except on a few occasions when
rain, hail, or snow comes from the
Northward with *strong* wind.

For change of wind toward
Northerly directions,—

A THERMOMETER FALLS.

THE BAROMETER FALLS
for Southerly wind
(including from South-east, by the
South, to the Westward),
for wet weather,—for stronger
wind,—or for more than one of
these changes :—

Except on a few occasions when
moderate wind with rain (or snow)
comes from the Northward.

For change of wind toward
Southerly directions,—

A THERMOMETER RISES.

On barometer scales the following contractions may be useful:—

RISE
FOR
NORTH
N.W.—N.—E.
DRY
OR
LESS
WIND.
—
EXCEPT
WET FROM
NORTH.

FALL
FOR
SOUTH
S.E.—S.—W.
WET
OR
MORE
WIND.
—
EXCEPT
WET FROM
NORTH.

“When the wind shifts against
the sun,
Trust it not, for back it will run.”

—
First rise after very low
Indicates a stronger blow.

—
Long foretold—long last,
Short notice—soon past.

In addition, the following are some of the most reliable inferences to be drawn from atmospheric appearances, as stated by Admiral Fitzroy in his weather book:—

A rosy sky at sunset	Fine weather.
A sickly greenish hue at sunset	Wind and rain.
A red sky in the morning	Foul weather.
A grey sky in the morning	Fine weather.
A high dawn, <i>i.e.</i> , daylight first seen over a bank of clouds	} Wind.
A low dawn, <i>i.e.</i> , daylight first seen close to the horizon	} Fair weather.
Soft, delicate-looking clouds	Fair weather.
Large, heavy-looking clouds	{ Rough, changeable weather.
High upper clouds driving in a contrary direction to those nearer the earth	{ Change of wind in the direction of the clouds above.
Dew and fog	Fair weather.
Great clearness of atmosphere, and various sounds very distinct, though distant	} Wind and rain.

SOME ADDITIONAL NOTES.

Small clouds with north wind	Continued fine weather.
Large shadowed clouds in heavy masses	Squalls and rain.

Fog at sunrise, soon vanishing	Fair weather.
South and west winds in winter	Wet, stormy weather.
Lightning in winter	Storm and sleet.
When wind comes before rain or snow	Moderation of weather.
When wind comes after or with rain or snow	Foul weather.
In bad weather, if rain and clouds suddenly pass away, and sun shines bright, with south or south-west wind	Foul weather, worse than before.

When the wind follows the course of the sun, though it blow hard, it is steadier, and is more to be trusted, and its rising and falling can be easier foretold than when it backs, *i.e.*, goes from N. to W., to S. to E., though it rarely goes right round the compass.

It is a common error that the moon influences the weather, and that if fine weather or frost set in with a new moon, or changes at full moon, such change will continue.

It is also a common error that a hot season follows a cold one, or the reverse. This is entire chance, though it was remarkably the case in 1881-82. The cold of January, 1881, was most intense, and the summer of that year was the hottest ever recorded in the British Isles (92° in the shade, or a greater heat than any recorded at Bombay for many years).

When people see wildgeese flying overhead they look wise and say, "What cold weather we shall have!" The birds are merely leaving far-off regions, which they have found too rigorous to obtain food; but whether such frost will extend to where they are *seen* is a remote possibility.

Signs of a hard winter, such as berries in unusual abundance, swallows congregating earlier than wont, and so forth, are one and all absurd.

How can a tree in the spring of the year *one* know what sort of winter will occur at the end of that year and the beginning of *two*, and bring forth, by means of blossom that turns into berries, a supply of food for the starving birds in their distress six months *beforehand*?

WILDFOWL PRESERVATION.

The Wildfowl Preservation Act as it now stands, that is from March 1st to August 1st, is a source of constant complaint, and presses hardly on those men who make a *living* by shooting wildfowl, and such, above *all* others, have a right to be considered.

I offer the following remarks, not as suggestions but as facts, so that those interested may draw their own conclusions.

In the first place, I will allude to the needless protection of Brent Geese, for to a fowler they are of the greatest value, and to him may be said to represent all their species, other Geese bearing a very small proportion in his bag, as they rarely cross his path. Brent Geese never breed with us and require no protective law *whatever*; they are precious well able to take care of themselves at all periods of their existence when on the British coast. It is not altogether the actual killing of these birds that the fowler feels he is forbidden to do, good end, but also the fact that he is unable to earn an odd pound by taking out gentlemen gunners in their pursuit. This seems to him especially hard, though the number of Brent killed by such visitors might be very small.

Late in the season Brent are, as a rule, difficult of approach; but there they are in thousands, each bird worth near a day's support to a poor man. Why should he not have it in his power to obtain them if he can, or even hire his belongings and himself with that intention to others, who fancy they can kill these birds, or wish for the sport of following them, and are ready to spend their money to the gunner's benefit with that object? Brent Geese remain in great numbers till the middle of April, and even later, and it is an uncalled-for bit of oppression to forbid shooters taking advantage of them in March, as after a severe winter they can now and then do. Brent Goose and Wigeon

shooting is the staple sport and livelihood of the coast gunner, and as no possible harm can accrue to these birds, however late they were shot, in regard to their nesting, the shooter should be allowed at all times to follow and kill them—if he can.

The Wildgoose tribe are not mentioned in the schedule of the Act, so that all Geese found inland, seldom on salt water, may be legally killed at any time by leave of owner or occupier of the land. Whereas the Brent Goose, which never goes inland or even above high-water mark, has the same protection as Wild-duck (except that the penalty for killing the former is lower, there being, of course, no owner outside high-water mark to give leave). This is absurd and invidious. Brent Geese do not breed anywhere in Europe but in Nova Zembla, Grinnell Land, and such far-off places ; and probably in Polar lands yet unvisited by man.

As to Wigeon, *practically* they do not nest in the British Islands, and the few that do so in the far north of Scotland are then so isolated that their protection is fanciful. Their date of nesting is also so late as to be well outside any close time.

Brent and Wigeon are what the fowlers pin their hopes on, and it is unfair that because some fowl really require careful looking after, those that do not, and which are all-in-all to the fowler, should be taken from him equally with those that do.

A few decoys that lie near the coast—and they are very few—take Wigeon, and they sometimes do well with these birds on their return flight northwards in March. Their owners would be glad of an extension in the matter of Wigeon, which,

together with the fowlers, they are well aware require no protection.

Those who insist upon a universal close time to suit their interests, such as the inland decoy-owners and marsh-shooters, do not know, or will not consider, that March 1st, or even March 15th, is most unreasonable with regard to the coast-shooters, who depend upon Brent and Wigeon for a living—two species that require no looking after. Wigeon can often be shot on the coast in mild seasons up to as late as the end of March. These non-breeders should surely, therefore, be thrown open to the gunners, and of great benefit such permission would be to them, as well as to the decoy-owners near the sea. A close time, as dates must be named, from March 25th for, at all events, Brent and Wigeon—I will not now allude to other non-breeders—all other birds from March 1st would please most people and harm none. These two species would satisfy the coast men, for they can kill few others after March 1st.

As to dealers confusing two such well-known species as Brent and Wigeon with other fowl, it is unlikely; there is no such difficulty about Grouse, Pheasants, or Partridges.

In Holland they have different close time for Ducks and other wildfowl, and in Canada for various kinds of Ducks.

As to the Diving Ducks, they most rarely nest with us, some of them never, and, with Brent and Wigeon, require no protection; but they are, however, rarely shot, as they are for the most part worthless, and too wary to waste time over.

It is an error to imagine that all fowl are unfit for food in the early spring. Fowl that do not pair or nest with us are good at all times they can be killed on our shores. Though many of our most prized shore birds, such as Grey Plover, Whimbrel, Godwit, Knot, etc., never nest with us, others do, such as Curlew, Golden and Green Plover, etc. Different close time for more than a few of the most valuable and well-known species, such as Brent and Wigeon, might cause confusion, and a trial with these latter might at first be made. We have an Act elastic enough for anything, if counties with sea-coast and fowl would only take reasonable advantage of its provisions.

Wild-duck and Teal foremost, then Pintail, Shovellers, and Shellduck amongst swimmers, are about the only fowl that require careful protection. Wild-ducks nest very early, often long before close time ends, but they then take good care to retire from the coast to preserved waters, where they are cherished. Teal act similarly, and a frost rarely occurs severe enough to drive them to the coast after February 15th.

Though Wild-duck might now and then be killed with Wigeon at night in March, it would be but seldom. They are remarkably watchful when they leave their preserves to feed, and choose their ground with great caution.

In most decoys Wild-duck are rarely taken in March ; Teal not often after January ; so March 1st, no doubt, with these latter birds, is a date that suits decoy-owners admirably ; and these are the two species they rely on for profit. But decoy-owners

and gunners must pull together, for by night the gunners have their chance, by day the decoymen, at the same birds. The interests of both are identical, and were it not for the decoys which act as shelters (I am now alluding to England), far less Wigeon would remain about the coast than is now the case.

Coast and inland shooting of wildfowl is totally different, and the difficulty lies in that very few people know anything about the habits of wild birds, however many there be who shoot them. The vast majority of fowlers are coast-shooters; and though these men have a practical acquaintance with all wildfowl, they are seldom in a position to make themselves *heard*; on the other hand, the inland flapper-shooters, who judge of all fowl by a few half-tame birds on their ponds and marshes, and so fancy they know all about the subject, are chiefly landowners, and therefore men of position and influence. These latter are also backed up by ornithologists, who know little of the ins and outs of *real* fowling, *i.e.*, coast-shooting.

There are a few—perhaps a score—decoys in the British Islands, their owners rich men; but there are some thousands of poor fowlers, who, because an Act is in force that pleases the former, are out of the hunt, and a means of living is often denied them in consequence. It is their turn now to be considered, and if they can be benefited without the least injury to others, or to the birds, *why not?*

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WILDFOWL RECORD.
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Place.	Cock.	Snipe.	Duck.	Wigeon.	Teal.	Various.	Total.
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